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# LEONARDO DA VINCI



# LEONARDO DA VINCI

*Artist, Thinker, and Man of Science*

FROM THE FRENCH OF

EUGÈNE MÜNTZ

MEMBER OF THE INSTITUT DE FRANCE

KEEPER OF THE COLLECTIONS IN THE ÉCOLE DES BEAUX ARTS

*With Forty-eight Plates, and Two Hundred and Fifty-two Text Illustrations*

IN TWO VOLUMES

*Second Volume*



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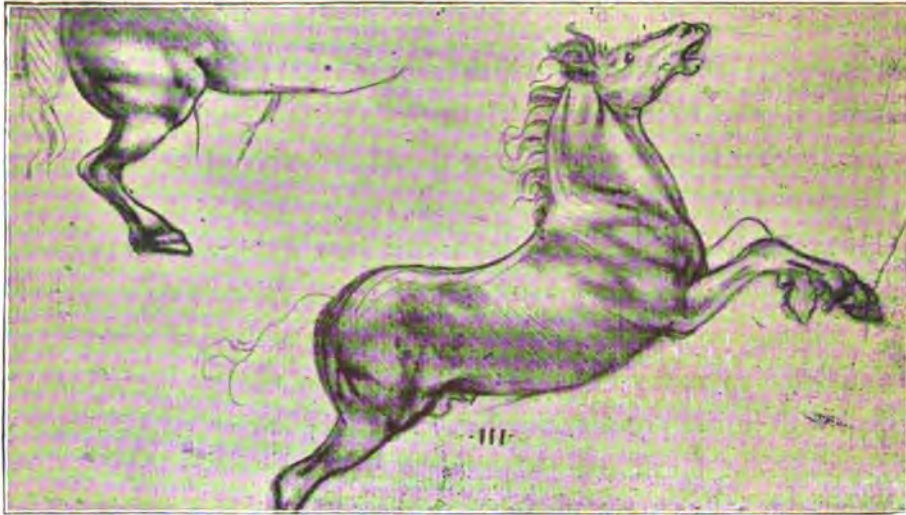
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HEAD OF A YOUTH.  
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A STUDY OF HORSES.  
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## CHAPTER I

### LEONARDO'S DEALINGS WITH THE ANTIQUE

"L' imitatione delle cose antiche e più  
laudabile che quella delle moderne."

—LEONARDO DA VINCI.



STUDY FOR AN EQUESTRIAN STATUE.  
(Windsor Library.)

THE initial stage of Leonardo's career coincides with the last supreme encounter between the ancient tradition (the tradition of the Middle Ages), and the new spirit of the times. Down to about the third quarter of the fifteenth century, painting, if we except the painting of the school of Padua, had sought inspiration from Roman models for details of costume or ornament only. But now, taking example by the sister arts of architecture

and sculpture, it strove to assimilate the actual principles, the very essence, of classic art. Botticelli, Ghirlandajo, and above all, Filippino Lippi, exerted themselves unceasingly to build up their frescoes or pictures on the teachings offered them by that army of

statues, some specimen of which came to light each day under the pickaxe of the excavator. These efforts, rudimentary enough at first, culminated some years later in the triumph of classicism under the banner of Raphael and his disciples.

How did Leonardo understand, and how did he turn to account, this factor, which it became more and more difficult to neglect, this factor which spread itself over the intellectual life of the "quattrocentisti" by so many ramifications? This is the problem I propose to deal with in the present chapter.

At the first blush, one is rather inclined to deny that Leonardo ever felt the influence of classic models. "He alone," says Eugène Piot, "was the true 'faultless painter.' The study of nature, untrammelled by absorption in classic ideals, a constant and unremitting study, carried on always and everywhere, with a perseverance and tenacity peculiar to himself, had revealed to him all the secrets of power in art, all the mysteries of grandeur and physical beauty."<sup>1</sup>

Another critic, my lamented friend, Anton Springer, is no less positive: "Leonardo's axiom, that nature is the artist's true domain, that the study of nature should be inculcated, not only as the best, but as the only real discipline, determined his attitude towards the antique, and dominated his judgment of the historic development of art. It has often been remarked how extraordinarily slight was the influence exercised over him by the wonders of antiquity. In his pictures, indeed, it plays a very insignificant part, while in his writings, it never manifests itself at all. In his youth, he drew inspiration once or twice from classic sources, as when he painted a Medusa's head entwined with serpents, and drew a Neptune for his friend, Antonio Segni. The sea-god was represented on a car drawn by sea-horses on swelling waves, and surrounded by all sorts of marine beasts. As the drawing has not come down to us, it is impossible to form any opinion as to the measure in which Leonardo here utilised classic forms. The pictures of *Bacchus* and of *Leda* belong to an earlier period. Whether the *Bacchus* in Paris, and the various versions of the *Leda*, may lay claim to authenticity, is a question on which critics have not yet been able

<sup>1</sup> *Le Cabinet de l'Amateur*, 1861-1862, p. 50.

to agree. But be this as it may, the heads in all these pictures are of the individual type created by Leonardo, and show no trace of classic influences.”<sup>1</sup>

Given Leonardo's independent spirit and his critical tendencies, it is evident that he was never of those who accept stereotyped formulæ and ready-made principles, either in his maturity or in his youth. Nothing would have been more opposed to his aspirations, either as an artist or a man of science, than such acceptance. Did he not lay down the following rule in the *Trattato della Pittura*?—“A painter should never attach himself servilely to another master's manner, for his aim should be, not to reproduce the works of man, but those of Nature, who, indeed, is so grand and prolific, that we should turn to her rather than to painters, who are only her disciples, and who always show her under aspects less beautiful, less vivid, and less varied than she herself presents when she reveals herself to us.”

Although Leonardo left the question he once propounded to himself unanswered—Is it better to study drawing from nature, or from the antique?—he was more categorical in another passage of the *Trattato*, a passage missing both in the original manuscripts and in the Vatican codex. It is only to be found in the Barberini MS., and runs thus: “It is a common fault with Italian painters to introduce into their pictures whole-length figures of emperors imitated from various antique statues, or at least to give to their heads an air which we find in the antique” (cap. 98, to be taken in conjunction with cap. 186 of Ludwig's edition.)

Leonardo, in fact, had too fine a taste to allow him to introduce into the art of painting effects proper to sculpture, as the great Andrea Mantegna was doing at this very time. For this reason he did not believe that painters would profit much by the imitation of antique statues. But, as a fact, these opinions are all more or less superficial. A careful study of Da Vinci's work leads us to the inevitable conclusion that whatever he may have said of the antique, and however completely he may have avoided dependence upon it, he was well acquainted with it in practice, and had assimilated its spirit. We may oppose, for instance, to the declarations of faith we have just been

<sup>1</sup> *Bilder aus der neueren Kunstgeschichte*, vol. i., p. 316.



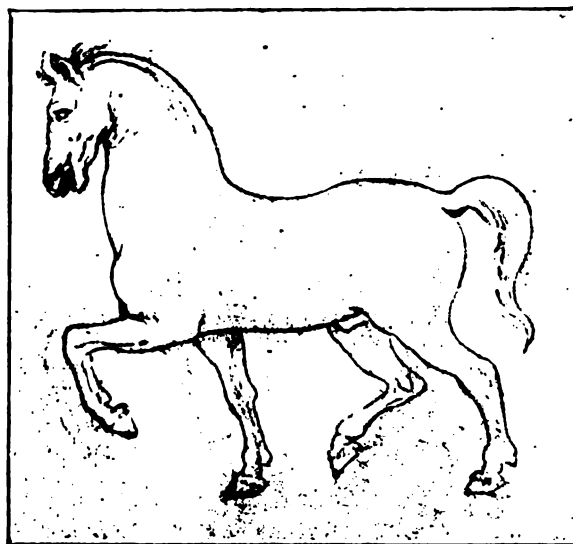
STUDY FROM ONE OF THE QUIRINAL HORSES, SCHOOL OF LEONARDO.

quoting, the following very definite assertion: "Suppose that an artist had to choose between copying antique models or those of modern times, he should choose the antique for imitation in preference to the modern."<sup>1</sup>

Let us consider first the branch of art which is, as it were, the parent and frame of the rest, imposing upon them its

own laws of arrangement, of symmetry, and even of illumination; I mean, of course, architecture. What was the attitude of Leonardo

towards it? The answer is easy. He admitted the ancient orders only, except that he would allow their occasional combination with the Byzantine cupola. He accepted with no less eagerness the authority of Vitruvius, to which, indeed, he was constantly referring.<sup>2</sup> Many of his designs reproduce, or at least recall, Greek and Roman monuments, especially



STUDY OF A HORSE. (FROM DR. RICHTER'S WORK.)

(Windsor Library.)

the mausoleum of Halicarnassus; one of his ideas for the base

<sup>1</sup> "L'imitatione delle cose antiche è piu laudabile che quella delle moderne." (Richter, vol. ii., p. 434.)

<sup>2</sup> Richter, vol. ii., pp. 429, 442, 452, 453.



of the Sforza statue was taken from the castle of St. Angelo at Rome.

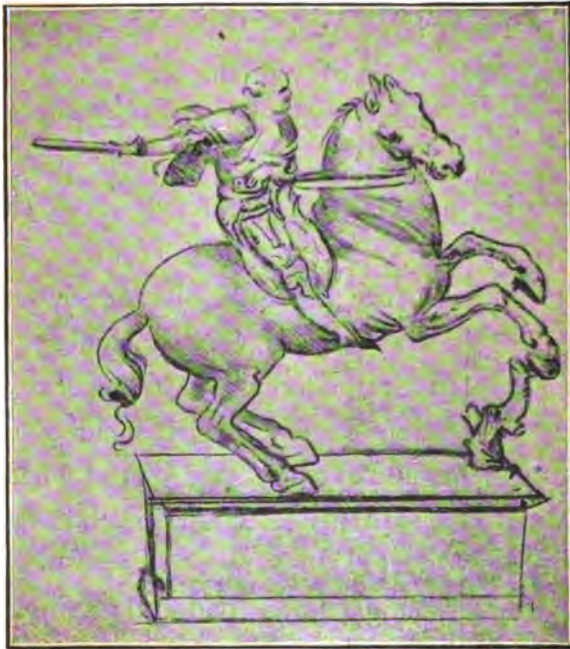
From these premises flows a series of deductions of great importance, as the reader will readily understand.

The mere fact that Leonardo accepted Roman forms in architecture tends to prove that he admired classic methods in the provision of architectural settings and in the arrangement of figures in that setting. The principles of grouping which he followed in the Sforza statue, in his *Last Supper*, in his *Saint Anne*, are in no way inconsistent with those of antique models.

When Leonardo lamented that he was unable to equal the ancients in symmetry, he was, perhaps, thinking of their mastery of the science of composition. One of his own contemporaries, a certain Platino Piatta, places the following declaration in his mouth:—

Mirator veterum discipulusque memor  
Defuit una mihi symmetria prisca, peregi  
Quod potui; veniam da mihi, posteritas.<sup>1</sup>

So far as the canon of human proportion was concerned, Leonardo deferred, more perhaps than was reasonable, to the laws laid down by Vitruvius.<sup>2</sup> The latter, he says, declares that the measurements of the human body are thus correlated: four fingers make one palm, four palms one foot, six palms one cubit, and four cubits



STUDY FOR THE EQUESTRIAN STATUE OF FR. SFORZA.

(Windsor Library.)

<sup>1</sup> Bossi, *Delle Opinioni de Leonardo da Vinci*, p. 14-15.

<sup>2</sup> Richter, vol. i., p. 182, no. 343.

or twenty-four palms the total stature of man. "If you separate your legs far enough to diminish your height by one-fourteenth, and stretch your arms outwards and upwards until your two middle fingers touch a line drawn horizontally across your poll, then your extremities will touch a circle of which your navel is the centre, and the space enclosed between your legs will be an equilateral triangle."

The attention Leonardo gave to the nude should also, I think, be ascribed to his study of the antique.

Every now and again, especially in his sketches for the *Adoration of the Magi* (vol. i., p. 67), he drew figures quite undraped, so that he might the better observe their structure and the play of their movements.

In Leonardo's method of rendering the human figure we also find analogies with the antique. Excluding portraits and modern costumes from religious pictures, his efforts were given to make his personages excel by their own beauty, instead of through the brilliancy of their ornaments and surroundings. And what simplicity in his composition! What rigour in his selection! What thoroughness and completeness in his synthesis!

The young painter had little sympathy with realism in costume. Living in an ideal world, the modes and habits of his time did not trouble him, so that nothing is rarer in his work than to find memoranda of actual life, or reproduction of this or that landscape or building. No artist has shown less solicitude in those directions. He was interested in man himself, and not in man's historical setting.<sup>1</sup>

Leonardo's proscription of the costume of his own time, a costume reproduced with so much care by the "quattrocentisti," was, like the retrospective nature of his investigations, a proof of his abstract and idealistic mind. Putting aside a few portraits, the figures he painted are robed after the antique; they wear tunics, togas, cloaks; and wear them with an ease which justifies us in saying that no artist has at

<sup>1</sup> Among the rare exceptions to this rule we may quote a few drawings of young men armed, and kneeling, in MS. L. at the Institut (Ch. Ravaisson-Mollien, vol. v., fols. 2 and 4).



XIV

*Head of an Old Man.*

( OF FOURTEEN.)



Painted by Gen. Louis-Marie, France.

Pl. X. V.



once modernised and preserved the noble simplicity of antique costume so successfully as the author of the *Last Supper* and the *Mona Lisa*.

Leonardo declares in the *Trattato* that the representation of contemporary fashions should be avoided as much as possible ("fugire il più che si può gli abiti della sua età"), except in the case of funerary statues. In this connection he relates how, in his youth, "every one, young or old, wore clothes with edges cut into points, each point in turn being cut into smaller ones. Shoes and head-dresses, pouches, offensive arms, collars, trains, the edges of petticoats, even the mouths of those who wished to be in the height of fashion, were adorned with deep indentations. Next," he goes on to say, "came a time when sleeves grew so voluminous that they became larger than the garments to which they were attached. Then collars grew so high that they ended by covering the whole head. Afterwards they went to the opposite extreme, and were made so low that they were no longer supported by the shoulders, which they failed to reach. Later again, garments were made so extravagantly long, that they had to be carried over the arm to avoid being trodden upon. Then they were made so short and skimpy that they hardly reached the waist and elbows, and their wearers suffered martyrdom, and occasionally burst their sheath. Shoes were made so small that the toes mounted one upon the other and became covered with corns."

Leonardo's ideal dress was, for an old man, a long and ample garment, in fact a toga ("Che il vecchio sia togato"); for a youth a short, close-fitting one ("il giovane ornato d'abito"), open above the shoulders, except in the case of monks and priests (cap. 541).

So far as his conceptions go, no one approaches more closely to the pagan ideal than Leonardo. Who has professed a greater love for form than he, or has cultivated art for art's sake with greater frankness? Who is more resolute in celebrating the glories of physical beauty, in sacrificing the literary significance of a work of art to some fascinating countenance, to some lovely exercise in the nude? In this connection we may safely declare that if Leonardo did not

copy the antique, he at least assimilated its spirit more completely than any contemporary. He approaches the Greeks themselves in



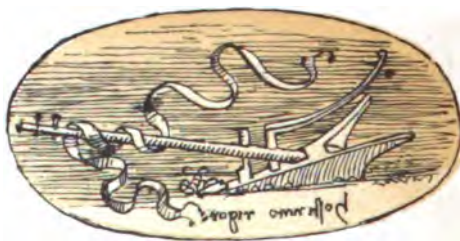
FIGURE IN ANTIQUE DRAPERY. (FROM DR. RICHTER'S WORK.)  
(Windsor Library.)

the freedom and evident capacity for movement of his figures, as well as in an indescribable rhythm and inspiration. He was Greek, too, in his love for those androgynous forms, uniting masculine vigour with feminine grace, which play so large a part in his work, and of which the most complete type is the *S. John the Baptist* of the Louvre.

From all this to the treatment of pagan subjects was but a step, and Leonardo took it

more than once. He painted a *Medusa*, a *Triumph of Neptune*, a *Leda*, a *Pomona*, a *Bacchus*. In such of these as have survived the conception is in every way satisfactory, being equally removed from the archæological pedantry dear to some artists of the time, and from the anachronisms of others.

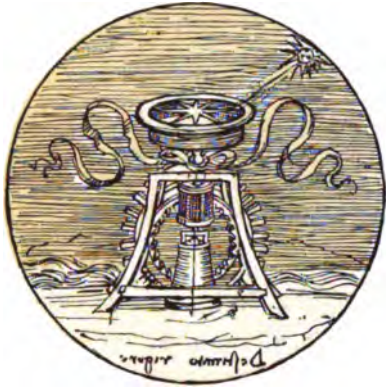
Leonardo, however, was curiously forgetful of fitness and historical colour when he set out, in a sketch of the Deluge, to introduce Neptune with his trident and Æolus with his bag of winds! To represent the infernal regions he recommended that in the Paradise of Pluto should be placed



UNRELENTING RIGOUR.  
(Windsor Library.)



twelve vessels, symbolising the mouths of Hell, from which devils should emerge, with Death, the Furies, a crowd of naked and weeping children, ashes, and fires of different colours.<sup>1</sup> All this is essentially antique, nay, pagan.



RIGOUR RELENTING.  
(Windsor Library.)

But although he took hints from his Greek and Roman predecessors, Leonardo had no idea of tying himself to their chariot wheels. This we may easily see from the way in which he treated iconography, allegory, and kindred subjects. No artist has ever pushed independence farther than Da Vinci; we may even say that he

pushed it too far, for in matters like these it is absolutely necessary that a painter should be in sympathy with his public, a result only to be arrived at either by deferring to tradition, or by extraordinary proselytising efforts on his own part. But Leonardo followed neither course, and many of his conceptions would be quite incomprehensible without the help of the explanations he has left us.

Rejecting all but a few of the traditional attributes (a column for Courage, three eyes for Prudence, and so on), he undertook to create a complete symbolism for himself. He proposed to represent Fame in the shape of a bird covered with tongues instead of feathers, to place in the hand of Ingratitude a burning brand, suggesting



NUDE STUDIES FOR FIGURES IN "THE ADORATION OF THE MAGI."  
(Valton Collection.)

<sup>1</sup> Richter, vol. i., pp. 306, 354; Ch. Ravaisson-Mollien, MS. G., fol. 6.

the wood which nourishes a fire, but is itself consumed; or again, to symbolise Ingratitude by a pair of bellows consumed by flames.<sup>1</sup>

One of the drawings at Christ Church, Oxford, shows a woman astride of a skeleton on all fours; she has pendulous breasts, one hand raised in the air, the other supporting a vase. We should have found this an enigma very difficult to solve had the master not provided it with a long explanation. Here he meant to figure Envy. Envy, he explains, is represented making a contemptuous gesture towards heaven with one hand, because, if she could, she would direct her strength against the Deity; her face is a benevolent mask; her eyes are wounded by palm and olive branches, her ears by the myrtle and the laurel, which means that victory and truth offend her. Lightnings flash from her body, typifying her calumnies; she must be dry and thin, because she continually torments herself. A swelling serpent feeds on her heart. Her quiver is filled with tongues instead of arrows, because they are her favourite weapon. She must have a leopard skin, because that animal kills the lion with jealousy by giving him food for it.<sup>2</sup> Her hand must hold a vase filled with flowers, scorpions, toads, and other venomous animals; and she must ride upon Death, because Envy, being deathless, is never tired of commanding. The bridle she holds should be charged with various weapons, instruments of death.<sup>3</sup> A second design on the same sheet represents the *Combat between Envy and Virtue*. The latter, figured as a fine, naked young man, thrusts a branch of palm into the eyes and one of olive into the ears of his enemy. Envy, who grasps him so closely that their two bodies seem to form but one, brandishes a torch behind her antagonist's back and lays one hand upon his quiver. Leonardo provides the following comment: "As soon as Virtue is born, she begets Envy; and one may see a body without a shadow more easily than Virtue without Envy."<sup>4</sup>

<sup>1</sup> Ravaisson, vol. v.; MS. M., fol. 5.

<sup>2</sup> This legend of the leopard is evidently taken from the *Bestiarius* of the middle ages, which Leonardo copied. See below, chap. iii.

<sup>3</sup> Richter, vol. i., p. 353-354.

<sup>4</sup> Richter, vol. i., p. 354.

After all this I may discuss in detail the question of Leonardo's imitations of the antique. They are vastly more numerous than is generally supposed, and in many definite points they corroborate the general view here put forward.

To take the question of sculpture. It is not proved that Leonardo made any use of the colossal horses of the Quirinal, at Rome—the drawing of one of them, in the Resta collection at the Ambrosiana, is certainly not by him—but, on the other hand, I am certainly inclined to maintain that he studied the famous antique equestrian group in bronze, at Pavia: “Di quel di Pavia si lauda più il movimento che nessun'altra cosa.”<sup>1</sup> Dr. Richter here believes in a slip of the pen, and for Pavia would read Padua, the passage referring, in his opinion, to the *Gattamelata* of Donatello. But, in fact, no doubt is possible; the antique group at Pavia is meant and no other. Immediately after the phrase quoted above, Leonardo goes on to say that it is much more advisable to imitate ancient than modern productions. Where did Leonardo get the idea of his rearing horses? From the antique, undoubtedly.<sup>2</sup> We may easily convince ourselves of this by examining gems representing such things as the fall of Phaëton, the death of Hector, the death of Hippolytus, those, for instance, in plate xix. of D'Arneth's work on the Vienna cabinet of antiques.

Turning now to painting. We may point out, beside the more or less veiled reminiscences already alluded to, a certain number of textual imitations. In his studies for the *Adoration of the Magi*—the unfinished sketch in the Uffizi—attitudes continually recur which recall certain famous antiques, such as the *Faun* of Praxiteles, and the bronze *Narcissus*, at Naples. The same series of drawings contains a bearded individual obviously founded on the antique type of Silenus (see vol. i., p. 75–77).

<sup>1</sup> Richter, vol. ii., p. 434.

<sup>2</sup> Rearing horses are found on the medals of Hadrian, of Antoninus, of Septimius Severus, etc. (Froehner, *Les Médaillons de l'Empire Romain*, pp. 34, 72, 157, etc.) In many of his sketches Leonardo has represented a horse rearing over a conquered enemy, a motive which frequently occurs on ancient coins, on the medals of Lucius Verus, for instance, and Probus (Froehner, pp. 93, 242). A coin of Patraeus (340–315) shows us a horseman fighting a man on foot (Dury, *Histoire des Grecs*, vol. ii., p. 76).

In his studies for the *Last Supper*, the apostle seen in profile recalls in the most striking manner the Roman medallions of the time of the Antonines, notably those of Lucius Verus.<sup>1</sup>

Even for facial types Leonardo deigned, now and then, though rarely, to consult the ancients. His *John the Baptist*, in the Louvre, is clearly based on certain antique types, half masculine and half

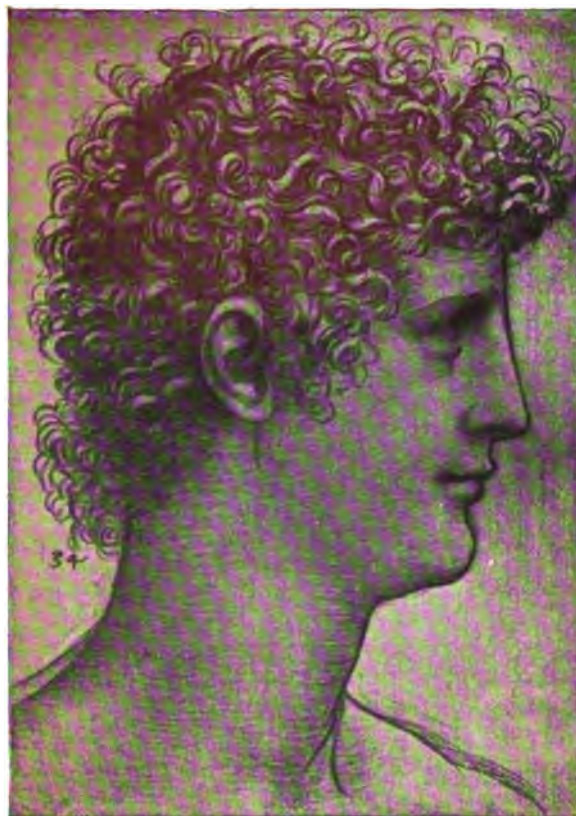
feminine, such as the "Apollino," the Bacchus, and the Hermaphroditus, and yet the combination is thoroughly Leonardesque.

If there be one page in this work of Leonardo which betrays study from nature, and especially study of the horse's anatomy, more than another, it is assuredly that *Battle of Anghiari*, of which one episode has been preserved in a drawing by Rubens, and in a few more or less partial copies. The episode is that known as the *Fight for the Standard*.

It had never occurred

to me to investigate in that direction, when accident, the great explorer, brought under my eyes a cameo presenting remarkable analogies, not to say more, with one of the motives employed by Leonardo. This cameo (see p. 16) represents the *Fall of Phaëton*.

<sup>1</sup> See *Médaillons de l'Empire Romain*, p. 93, et *passim*. As to Leonardo's imitation of the *Apollo Sauroctonos*, of Praxiteles, see vol. i., p. 204.

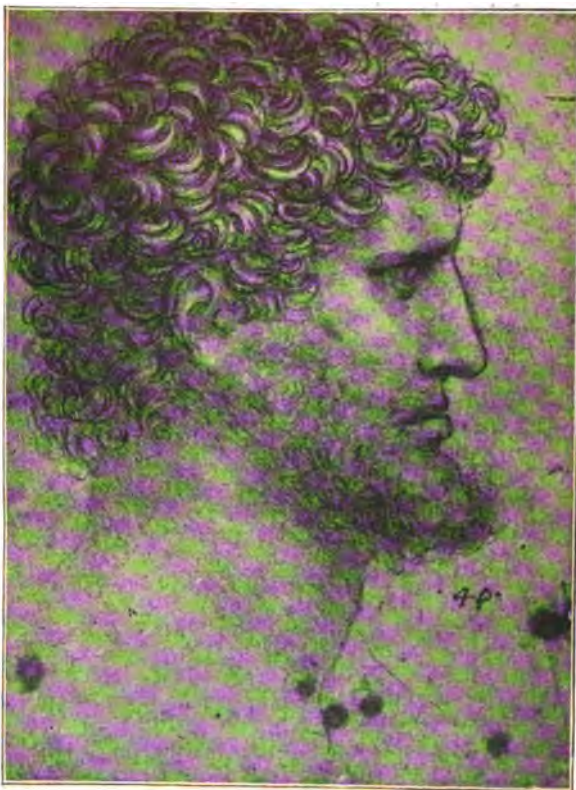


STUDY OF A HEAD FOR "THE LAST SUPPER." INSPIRED BY THE  
ANTIQUE.

(Windsor Library.)

In spite of its beauty of workmanship, my first impulse was to look upon it as an imitation dating from the period of the Renaissance, in which case it would be a copy from the *Battle of Anghiari*, and not its prototype. But how was I to persevere in my doubt of its antiquity when I found it engraved in the *Trésor de Numismatique et de Glyptique* (mythological section), and unreservedly accepted by an archæologist of Froehner's perspicacity?

The motive of this cameo was very popular with the ancients, although it can scarcely be traced beyond the Empire. Examples mostly date from the third century of our era.<sup>1</sup> The horse on the left, which stretches himself upwards, is textually repeated on four sarcophagi reproduced by Wieseler.<sup>2</sup> That which offers the most striking analogies with the *Battle of Anghiari* came to the Uffizi in the seventeenth century, having



STUDY OF A HEAD FOR "THE LAST SUPPER." INSPIRED BY THE ANTIQUE.

(Windsor Library.)

<sup>1</sup> According to Galien, L.

B. Alberti mentions a ring on which was engraved Phaëton dragged down by four horses, "of which one could distinguish perfectly the reins, the feet, the chest" (*De la Statue et de la Peinture*; translation by Claudius Popelin; Paris, 1869, p. 180).

A sarcophagus with a *Death of Phaëton*, in which this characteristic group again occurs, was drawn about the end of the fifteenth century by the anonymous author of the collection of Roman views and buildings which is now in the library of the Escorial.

<sup>2</sup> *Phaëton*, Göttingen, 1857.



previously been in the Colonna gardens at Rome.<sup>1</sup> But let us go back to the cameo. Leonardo must certainly have seen it in Florence, where it is still. We are confirmed in this belief by the presence, among the jewels deposited with Agostino Chigi by Piero de' Medici in 1496, of a cameo representing *Phaëton*:<sup>2</sup> "Una tavola d'argiento, con cinque cammei, cioè uno con Fetonte in mezzo et le teste de imperatori da canto." The cameo was certainly already popularised in Florence by means of casts.

But there is more in the *Battle of Anghiari* than this conveyance of a particular motive. Leonardo borrowed the types of his horses from the *Phaëton* of the ancient graver or sculptor. Compare the horses in his drawings for the Sforza monument with those in the *Battle of Anghiari*. The difference is striking. In the former the silhouette is well-marked and full of nobility; in the latter, the forms are thick and fleshy, just as we see them in the Roman gem. Leonardo's horse has this peculiarity; that if we examine him in the drawing of Rubens, which is clearly turned the same way as the original, he exactly reproduces the horse on the right in the cameo, while if we turn to Edelinck's engraving, which is reversed, he agrees exactly with the horse on the left.

It was on this occasion that Leonardo was unluckily inspired to demand the secret of encaustic painting from Pliny.<sup>3</sup> He could make nothing of it. He attempted to carry out the *Battle of Anghiari* in the method, but met with so many difficulties and disappointments, that he gave up the whole matter in disgust and abandoned Pliny, and encaustic painting, and, alas! the *Battle of Anghiari*, which might otherwise have survived to our own times.

Compared to the grand total of Leonardo's drawings, a total to be reckoned in thousands, the number of his copies from the antique does not at first sight seem very great. Dr. Richter,

<sup>1</sup> Dütchke, *Antike Bildwerke in Oberitalien*, vol. iii., p. 84.

<sup>2</sup> *Les Collections des Médicis*, p. 105.

<sup>3</sup> "Di Plinio cavò quello stuccho con il quale coloriva, ma non l'intense bene." (Anonymous biography published by Milanese.)

the learned editor of his literary and scientific remains, goes so far as to say<sup>1</sup> that among all these countless drawings he had only found one single study from the antique, an equestrian statue, taken apparently from that of Marcus Aurelius, at Rome (pl. lxxiii.).

As a fact, his imitations are relatively numerous.

Among those of a more or less indefinite kind, we may quote the bust of an old man, draped in the Roman fashion, with his right hand thrust out through the folds of his toga (Richter, pl. xxx. ; cf. xxviii., no. 7). On the other hand, a drawing in red chalk, at Windsor, seems to me a reproduction of the torso of Pasquin, with an attempt to restore the lower part of the body. Again (Richter, pl. lxiii.), we have the drawing of a cameo bearing the design of a genius standing by the side of another figure.

If from figures we pass to motives of decoration, we are again met by a certain number of these borrowings. Accepting *The Annunciation*, of the Uffizi, as the work of Leonardo, we there find him introducing a marble tripod of extreme richness. A sketch more or less suggesting an antique tripod occurs in one of the Windsor drawings (Richter, vol. I, pl. lxii.). A candelabrum in the *Codex Atlanticus*, of great purity and harmony of form, is derived, beyond a doubt, from the antique. We may also refer to the harpies and trophies which were to have decorated the mausoleum of Trivulzio (*Saggio*, pl. xvi., and vol. i., p. 159).

To conclude, this great artist treated the antique as it should be treated by one who wishes to profit by its teaching, and desires to receive lessons rather than labour-saving formulæ. By dint of long and thoughtful, though intermittent study, Leonardo mastered the antique spirit. Allowing it to germinate freely within him, he counted upon the wealth and independence of his own nature to enable him to turn it to his own use, to transform it, and to

<sup>1</sup> Vol. i., p. 244.

<sup>2</sup> Like most of his contemporaries, Leonardo used an antique gem as a seal. His letter to Cardinal Ippolito d'Este (in the Modena archives) still bears the impression of a small cameo representing a head in profile.

produce with its aid works of art which should be essentially vital and modern.

In this chapter I have only discussed the relations between the antique and the *art* of Leonardo. I have now to do as much for his philosophy, his science, and his mechanics, and to show how, in those directions also, we continually encounter the Greeks and the Romans.



"THE FALL OF PHAËTON."  
AN ANCIENT CAMEO COPIED BY LEONARDO IN "THE BATTLE OF ANGIARI"  
(Museum, Florence.)





SKETCH FOR A BATTLE, AFTER A PHOTOGRAPH SUPPLIED BY M. ROUYEYRE.  
(Windsor Library.)

## CHAPTER II

THE POET, THE THINKER, THE PHILOSOPHER—LEONARDO'S CONVICTIONS, MORAL  
AND RELIGIOUS

"Léonard, ce frère Italien de Faust."  
(MICHELET.)



A YOUTH MEDITATING. STUDY  
FOR "THE ADORATION OF THE MAGI."  
(Valton Collection.)

THE painter of *Mona Lisa* and the *Last Supper* enchanted and dazzled his contemporaries from the first hour, and four centuries have not diminished the prestige of his artistic creations. As a thinker and investigator he has been less fortunate. It has required the efforts of several generations of learned men, from Venturi, Libri, and Govi, down to Uzielli, Richter, Charles Ravaisson-Mollien, Beltrami, and Piumati, to complete the work of rehabilitation.

I propose, in my turn, to inquire what place was occupied by letters in the activities of this universal genius. So far the problem has not even been attacked; and if I have to be content at last with a

negative result, I shall not regret any trouble which may enable me to penetrate a little more profoundly into the mind of such a man.

To form a true judgment of Leonardo's writings we must begin by recognising that here we have to do, in literature and philosophy no less than in science, with the self-taught man "par excellence." Education has little purchase on natures essentially original, and we may safely assert that the education received by this particular child of genius in the hamlet of Vinci and afterwards in Florence itself was about as careless as it could be. We can, moreover, point to evidence on Leonardo's early studies which bears every sign of authenticity. A biographer tells us that he showed an unbounded, even an extravagant, thirst for acquiring knowledge, but that his curiosity was equalled by the instability of his tastes. He passed from arithmetic to music, from natural history to the arts of design, and from these to the occult sciences, without any sign of fatigue, but also without any steady devotion. His literary and historical studies always occupied a second place.

In spite of his great faculty of assimilation, Leonardo always betrays a certain embarrassment before a literary or historical question. We may take him at his word when he calls himself "illiterato" and "uomo senza lettere." "I know well," he says somewhere, "that as I am not lettered, some impertinent individual may think himself justified in finding fault, and in calling me an illiterate person. Idiots! Do they not know that I might give the answer of Marius to the Roman patricians: 'It is by those who bedeck themselves with the labours of others that I am not allowed to enjoy my own.' They say that because I have not trained myself in letters, I cannot do justice to the subjects I wish to treat. They do not know that such matters as occupy me are better fitted for treatment by experiment than by words. Now, those who have written well have learnt from experience, to which I myself always look up as my master."

What suffering and humiliation may be divined behind such a confession!

With a reserve which does him credit, Leonardo abstains from all

critical judgment, except when a scientific opinion has to be contested. In his writings upon art he only once allows himself to be seduced into a judgment on a colleague (Botticelli) ; and so, when he has to deal with poets, thinkers, historians, he is content with the statement of facts. Even while proclaiming the utility and pleasure-giving power of history, at the very moment of confessing that "the knowledge of past times and of geography adorns and nourishes the intellect," he is continually guilty of the most extraordinary anachronisms. He talks somewhere of "the part played by Archimedes of Syracuse, who lived at the court of Ecliderides, King of the Cirodastri, in the wars between the Spaniards and the English (!)" He attributes to Cato the credit of having discovered the tomb of this same Archimedes, although the proverbial schoolboy could have told him that the honour was Cicero's. If his reticence of judgment in matters of art sprang from tolerance, or indifference, in matters of learning it is to be explained by an only too well founded distrust of his own knowledge. It is, in fact, hopeless to deny that, in spite of all his efforts, Leonardo never became a scholar. His glory rests on another foundation.

The embarrassments felt by a man of genius like this, whenever he had to invent a "mise-en-scène" or to find some telling formula, move us to deep pity as well as to boundless admiration. The clearest and most suggestive of analysts, he lacked the nicety and fluency of expression which education had made so easy to his Florentine fellow citizens. This is how, in default of schooling, in default of having mastered the secrets of versification like Poliziano, or the subtleties of Platonic philosophy like Marsilio Ficino, or the problems of the known and the unknown like Pico de la Mirandola, in default, indeed, of certain rudimentary branches of knowledge which his unimportant contemporaries had learnt as children, Leonardo failed of appreciation with the immense majority of his countrymen, in spite of the unrivalled scope of his genius. Again, what a mistake he made in a rhetorical age in despising oratory, and spurning the friendship of those whom we now call log-rollers ! And yet again, why did he not stay in Florence ? or settle in Rome ? The most famous scholars would have hastened

to exalt his genius. Castiglione would have given him a place of honour in his *Cortegiano*; Ariosto would have set him in the company of Charlemagne's paladins; Bembo would have written his epitaph in an eloquent mingling of pleasure and pain! . . . . But the Milanese men of letters, the obtuse and heavy-handed Ligurians and Cisalpine Gauls who were the intimates of Lodovico, could do nothing for the glory of their new fellow-citizen. The very language they wrote was too barbaric to be understood by the rest of Italy.

In his mature years Leonardo attempted to fill the gaps in his education. He applied himself more particularly to the study of Latin. Here he had everything to learn. If we may judge from the glossary he prepared for his own use, he had not even acquired the rudiments when he was some thirty-five or forty years old. He found it necessary to write down the meaning of such elementary pronouns, adverbs, conjunctions, and prepositions as "sed, aliquid, quid, instar, tunc, præter," &c.<sup>1</sup> I must hasten to say that his efforts were crowned with success. In the letter addressed to the Cardinal d'Este in 1507, he manages Latin epistolary forms with perfect ease. Elsewhere he quotes from the Latin, "Omne grave tendit deorsum.—Decipimur votis et tempore fallimur et mors deridet curas.—Anxia vita nihil!"<sup>2</sup> He even made himself acquainted with macaronic Latin. After entering in his notebook the loan made to Salai to enable the latter to complete his sister's dowry (1508), he gives himself up to these melancholy reflections :—

(Si) non restavis (habe) bis  
Si abebis, non tamen cito.  
Si tamen cito, non tamen bonum,  
Et si tamen bonum, perdes amicum.

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<sup>1</sup> Charles Ravaisson-Mollien, MS. 1, fol. 53 v°. Leonardo quotes, "Tullius, *De Divinatione*," but the passage cited is not to be found in Cicero (Richter, vol. ii., p. 171). The maxim that "God sells us all that is good at the price of patience" is borrowed from Horace (Müller-Walde, *Jahrbuch*, 1897, p. 142). From Celsius he borrows the following maxim, "Wisdom is the greatest good and physical pain the greatest evil" (Beltrami, *Il Codice . . . del Principe Trivulzio*, fol. 3). Besides all this we find accidental resemblances; for instance, he unconsciously approaches Virgil in his comparison of sleep with death (Richter, vol. ii., p. 292):

Placidoque simillima somno Mors.

<sup>2</sup> Ravaisson, vol. iv., fol. 84, and vol. ii., following upon fol. 94. *Ibid.*, vol. iv., fol. 50.

One of the most incomprehensible of Leonardo's compilations is the vocabulary in the Trivulzio Manuscript, which consists of at least seven or eight thousand words, ranged into four or five columns. Now and then it suggests the commencement of a dictionary of synonyms, but more often it seems meaningless. Reading the lines horizontally, we obtain results like this: "belicoso, glorifichato, rifrancare, unità, imaculata—ameno, piacevole, dilettevole—stupefacto, essmarrito"; reading them vertically we arrive at such results as "satisfatione, intento, origine, fondamento, cierchare, trovare, intendere," &c.<sup>1</sup>

According to Geymüller, these lists of Leonardo's represent an attack on the philosophy of language.<sup>2</sup> In the course of his reading he had noted the words which seemed to him the most telling; he had afterwards grouped them now as synonyms, now as terms opposed to each other in sense. Elsewhere he forms series of substantives and of adjectives, or of verbs derived from them or offering parallel meanings. He searches for words expressing ideas which flow naturally from some initial term, a proceeding that we should follow now if we had to compile a dictionary of analogies. Sometimes he takes as a base for his grouping the differences in meaning between words which resemble each other in sound. Orthographical likenesses and differences also attracted his attention; thus he asks himself how it is that *l* comes to be substituted for *r*, and "vice versâ." Grammar, logic, philology, all these were subjected to his investigations, which, unsystematic as they are, proclaim once more his insatiable curiosity.

He collected a library in which historians elbowed poets, and philosophers mathematicians or physicists. Numberless extracts and quotations bear witness to the wide extent of his reading.

The famous manuscript known as the *Codex Atlanticus* contains the catalogue of Da Vinci's little library. He had collected thirty-seven volumes, representing every branch of human knowledge, from theology

<sup>1</sup> These fantastic juxtapositions remind us of Rabelais. He, too, marshalled into three parallel columns a series of words of which we cannot grasp the relation: "Mignon, moignon, de renom,—laité, feutré, calfaté,—moulu, morfondu, dissolu," etc. (*Pantagruel*, ch. xxvi.—xxvii.)

<sup>2</sup> *Gazette des Beaux Arts*, 1895, vol. ii., p. 73.

to agriculture, and even to magic. He had besides borrowed a certain number of volumes from his friends: a Vitruvius, a Marliano, a *De Calculatione*, an Albertus Magnus, an *Anatomia*, a Dante. We know from the researches of the Marchese d'Adda that printed editions of all these existed in the fifteenth century. To form his collection Leonardo had only then to apply to the printers of Milan and its neighbourhood, for most of the books he owned were published in Lombardy.

It is a little surprising to find the literary element holding such an important place in the studies of Leonardo; Ovid, Dante, Petrarch, stand side by side with Poggio, Philelpho, Burchiello, and Pulci. Philosophy occupies as large a place as poetry. The titles of his books and the names of the authors he honoured — Albertus Magnus, Diogenes Laertius, Platina, Marsilio Ficino—prove the eclecticism and liberality of their possessor. Religion and morals are not forgotten; they are represented by the *Bible*, the *Psalms*, Æsop, the *Flowers of Virtue*; the champions of history are Livy, Justinian, and the chronicler Isidorus. Special treatises on arithmetic, cosmography, medicine, anatomy, agriculture, and the military arts complete Leonardo's library. The section devoted to natural history is remarkable; it includes the works of Pliny, of John de Mandeville, and a *Lapidarium*, that is to say, compilations in which romance fills as large a space as science.<sup>1</sup>

Italian scholars declare that Leonardo's grammar is that of the small Florentine shopkeeper, and that his orthography is of the strangest and most eccentric kind. He seems to have thought the letter *c* was pronounced like an *s*, unless accompanied by an *h*; so he

<sup>1</sup> The list of the volumes studied by Leonardo which the Marchese d'Adda has compiled from the *Codex Atlanticus* by no means exhausts the master's library. It should be completed by the various notes in the MSS. published by Dr. Richter (vol. ii., pp. 421-437, 445-454).

On the morals of primitive beings he quotes the *De Rerum naturâ* of Lucretius, of which various editions had even then appeared. Their hands, their nails, their teeth, he says, served them for weapons (Richter, vol. ii., p. 450). He notes, with his usual impassibility, that, according to Ammianus Marcellinus, 700,000 volumes were burnt during the siege of Alexandria. (*Ibid.*—Cf. Beltrami, *Il Codice di Leonardo da Vinci*, fol. i.)

writes "chasa," "chosa," etc. He doubles an *s* before a consonant, "quessto," "asspirare," etc. ; he substitutes *l* for *r* in "sobblietà," "iplocito," etc., and for *u* in "aldacia," "laldevole," etc. He was also in the habit of combining, in the German fashion, words meant to stand apart.<sup>1</sup>

In literature, as in art, it is difficult to imagine a less synthetic genius than Leonardo. What a contrast he affords to Michelangelo, whose various sallies and sarcasms have become so famous! Can we imagine Leonardo saying before a picture painted without brushes, that the artist would have done better had he condescended to use a brush, and painted rather less wretchedly ; or telling Francia's handsome son that his father made better figures in the flesh than on canvas ? Before Leonardo could formulate an idea or express a sentiment, he had to go through a long process of observation and analysis. In this respect he was more like a son of the North than one of those Florentines who were so famous in the great centuries for the clearness and vivacity of their ideas. On the other hand, how profound his laboriously built-up conceptions were ! When he had, at the cost of infinite labour, succeeded in giving form and unity to a composition, what a sublimity it reached !

Leonardo made up, and more than made up, for his lack of education by his natural gifts. His contemporaries agree in declaring that he was the best improvisatore of his time : "il migliore dicitore di rime all' improvviso del tempo." The incessant comparisons he sets up in the *Trattato* between painters and poets show that he took a deep interest in poetry. What kind of attempts did he make in it himself ? Did he write love songs, or did he pen those light verses of which Florentines were so fond ? Did he follow the example of his great rival, Bramante, whose sonnets, composed at Il Moro's court, pay so generous a homage to the comic muse ? We do not know. This is one more mystery in the life of the man characterised by Michelet as "the Italian brother of Faust." We do not even know whether he ever felt love for a woman. The five thousand pages of manuscript he has left us

<sup>1</sup> Govi, *Saggio*, p. 9.

do not contain the slightest allusion to a love affair. He seems to have lived for art and science, and, brother of Faust though he was, no Marguerite ever hung upon his neck to distract or console him.

To return to the poet. Barely some half dozen of his verses have survived, among them an impromptu so enigmatic and strange that hitherto no one has attempted to explain it :—

Se'l Petrarca amò sì forte il lauro  
Fu perch' egli è bon fralla salsicia e tonno.  
I non posso di lor ciancie far tesoro.<sup>1</sup>

This “jeu d'esprit,” incomprehensible at first sight, initiates us, as I think I can show, into Leonardo's relations with a whole group of poets, professional and amateur, settled at the court of Lodovico Sforza. The author, as we see, begins abruptly with the question, Why was Petrarch so fond of the laurel? Meaningless if taken alone, the problem is readily solved if we consider it in the light of the other compositions thrown off at this time by the hangers-on of Sforza. We know, in fact, that Bramante, Gasparo Visconti, Bellincioni, and many others engaged in violent disputes over the respective merits of Dante and Petrarch. Bramante distinguished himself by a boundless admiration for the author of the *Divina Commedia*. Leonardo, it is pretty safe to guess, was content to contribute this very un-classic triplet to the discussion.

Leonardo has long been credited with a sonnet which still enjoys a certain popularity. It expresses, in a rather clumsy and hackneyed form, an idea which any philosopher would be ready to endorse, an idea, moreover, as old as the world: “Let him who cannot do what he wishes, wish to do what he can.”<sup>2</sup> One of the master's biographers<sup>3</sup> relies on this when he calls Leonardo a poet-moralist, “familiar with internal conflicts, and gifted with qualities of style analogous to those which marked him as a painter. The

<sup>1</sup> If Petrarch was so fond of bay, it was because it is of a good taste in sausages and with tunny; I cannot put any value on their foolery (Richter, vol. ii., p. 377).

<sup>2</sup> Terence, for one, had already said the same thing: “Quoniam non potest id fieri quod vis, velis id quod possit.”

<sup>3</sup> Rio, author of *L'Art Chrétien*.



sonnet," he adds, "could not be excelled for precision and technical conciseness, and nothing could be more nobly pathetic than the frankness of its personal application."

Unhappily, modern criticism is ruthless, and Professor Uzielli, who has discussed the problems connected with Leonardo with such unequalled perspicacity, has mathematically demonstrated, if I may use the term, in an argument covering eighty-five pages, that this famous sonnet is really the work of one Antonio, a Florentine (Antonio di Meglio, according to Uzielli: according to others, Antonio di Matteo, who died in 1446).

Leonardo therefore had nothing to do with it, which is a pity, as its combination of good sense with a certain



AN EPISODE OF THE DELUGE.  
(Windsor Library.)

technical inexperience would have been thoroughly in keeping with his sincere and sagacious intellect.

After all these negative conclusions, the reader may well be impatient to learn in what, after all, Leonardo's talent as a poet consisted, and how I justify his inclusion among the Parnassians.

Open the *Trattato dell'Arte della Pittura* and read his description of the zephyr and the hurricane (cap. 68). In movement, warmth, and audacity it rivals Virgil's famous description of a storm, in the *Georgics*. As descriptive poetry, in which landscape and effects of light and atmosphere are rendered, sixteenth-century Italian literature produced nothing finer. Here and there we find a few subtle resemblances to the "concetti," which prove that Leonardo was not above turning occasionally to Petrarch as a model. "The divine strain which exists in the art of the painter puts an echo of the divine intellect in his, and enables him to create with perfect freedom a world of birds, of

plants, of fruits, of wide plains, of ruins perched upon mountain sides, of scenes calculated to excite awe and terror, or of smiling sites enamelled with many coloured flowers. Over these fields the soft breath of the wind spreads gentle undulations, as if the bending grass had turned to watch the flight of the breeze.<sup>1</sup> Or he shows us the swollen rivers flowing from the mountains, carrying down uprooted trees, mingled with rocks, roots, mud and foam, and driving before them everything that attempts to stem their progress. Or yet again the sea, its waves struggling with the tormenting winds, its superb undulations thrown up to the sky and then falling, to smother the gale which flogs it. The waves embrace and imprison the wind, which tears them apart and splits them, mixing with their foam, and venting its rage upon them. Sometimes, carried by the wind, the foam escapes from the sea, flies along the cliffs and promontories, and, leaping over the summits of the hills, falls in the valleys beyond ; some of it mingles with the wind and becomes its prey, some escapes and falls again into the sea as rain, some rushes down as a waterspout from the mountains, and chases before it everything which opposes its rage. Sometimes this latter encounters a breaking wave, dashes against it, and with it leaps to the sky, filling the air with a mist of foam ; and this mist, driven by the wind against the cliffs, begets dark clouds, which in turn become the prey of the wind their conqueror." (Cap. 68.)

Now and then, too, the poet-artist rises to a high pitch of pathos, as, for instance, in his description of the Deluge. This is really calculated to excite our terror and admiration, and compels us, as one biographer does not hesitate to say, to think of Shakespeare and Dante. After painting the unchained elements, the dark and cloudy air, torn by winds blowing from all points of the compass at once, and thick with floods of rain and hail ; the uprooted trees, dragged in clouds of flying leaves first to this side and then to that ; ancient trees torn up and destroyed by the fury of the wind ; fragments torn from mountain-sides by the rush of the swollen rivers ; animals, mad with

<sup>1</sup> This "conceito" is so exaggerated that I am inclined to think this passage is interpolated.

terror, taking to the mountain tops and forgetting their ferocity in the imminence of death, the poet passes on to the human side of the tragedy. He paints men, women, and children heaped on tables, planks, beds, or boats, where they groan and weep in terror at the fury of the wind ; others float about, drowned ; others fight with lions, wolves, and other savage beasts, for such refuges as they may have contrived to reach. "What terrible cries," he says, "one might have heard ringing through the darkened air, and mingling with the claps of thunder ! How many human beings one might have seen closing their ears with their fingers to avoid hearing these dismal sounds ! Others laid their hands over their eyes lest they should see the carnage worked upon their kind by the anger of God. Boughs of great oaks hung about with fugitives were carried away by the winds. Boats were overturned, sometimes whole, sometimes in many pieces, with the miserable refugees who had clung to them. Here were seen despairing men ending their own days, as a relief from agony ; some threw themselves down from high places, others strangled themselves ; some crushed the heads of their children, others pierced themselves with their own weapons, or falling on their knees, called upon God." . . .

Leonardo was evidently greatly pleased with this performance, for he returned to it no less than three times. First he produced a concise sketch, which he afterwards expanded into two much longer versions, between which there are numerous points of difference.

His description of a battle is equally rich and vivid. There his language is at once supple, flowing, and precise. He shows us the horses dragging their dead riders, and tearing the flesh from their bones, the piteous bodies hanging by the spurs and reddening with their blood the ground over which they pass ; the vanquished, pale, gaping, bewildered ; rivers of blood mingling with the dust ; dramatic episodes of every sort rendered with extraordinary energy and illusion.

The "littérateur" becomes still more conspicuous in the fables and apologies. These compositions, hitherto too much neglected, seem to

have to do with some ancient and more or less popular collection. I confess to strong doubts as to whether they issued from the imagination of Leonardo himself. However, in spite of much research, I have failed to discover any extraneous source, except for the fable of the *Rat and the Oyster*, which occurs for the first time in the Greek *Anthologia*, as M. Paul Meyer informs me. Leonardo may possibly have borrowed the incident from Francesco del Tупpo, whose edition of *Æsop's Fables* was published at Aquila in 1493. It was afterwards turned to account both by Alciati (*Emblems*, no. lxxxvi.) and by La Fontaine.<sup>1</sup>

Leonardo's scheme is similar to that of the classic fabulists. As with *Æsop*<sup>2</sup> and Phædrus, the animals set out to teach; but it was rather the shrubs and plants that he made the exponents of his preaching.

In the fable of the butterfly which burns itself, the fabulist is inspired by the memory of his own disappointments, and rises almost to eloquence. "O false light! how many must thou have miserably deceived in the past like me! Or, if I must indeed see light so near, ought I not to have known the sun from the false glare of dirty tallow?"<sup>3</sup>

Full, however, of good sense as they are, these fables are essentially wanting in character. Deep and judicious thinkers seldom excel in wit, at least in our conception of the term. The idea for them is more important than the form.

These apologues and fables borrowed from the vegetable kingdom

<sup>1</sup> "Toujours furetant, s'accommodant de tout, mais friand de bons morceaux, un rat aperçut une huître, épanouie dans sa maison entr'ouverte; il effleura de ses dents la frange humide de cette chair trompeuse; aussitôt les écailles avec bruit se reserrent: le rat est pris, il n'échappera plus de ce piège, de ce tombeau, où il est venu de lui-même chercher la mort."

Here is Leonardo's version:

An oyster, being turned out together with other fish in the house of a fisherman near the sea, he entreated a rat to take him to the sea. The rat, purposing to eat him, bade him open, but as he bit him, the oyster squeezed his head, and closed, and the cat came and killed him. (Richter, vol. ii., p. 335.)

<sup>2</sup> Leonardo possessed the *Fabulæ de Esopo historiate*, of which numerous editions had appeared in his time (in 1481, 1483, 1487, 1490 and 1497. D'Adda, p. 40).

<sup>3</sup> Richter, vol. ii., p. 336.



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*Landscape and a Water-Spout.*

(WINDSOR LIBRARY.)



Painted by Desiderius Van der Ploeg. Paris.





may be compared to the symbolical flora, given by Alciati in his *Emblems* (1531). The different kinds of trees are passed in review according to their signification :

The pine that waves upon the mountain  
Plays well its part upon the sea ;  
In change of place it often chances  
Men find their opportunity.

The chief actors in the *Fables* are : the owl and the tunny fish, the mouse and the badger, the spider and the grape, the monkey and the little birds, the dog and the sheepskin, the falcon and the duck, the cedar and its fruit, the peach-tree and the walnut, the walnut and the wayfarers, the fig-tree and the passers-by, the fig-tree and the elm, the bay-tree, the myrtle, and the pear, the chestnut and the fig-tree, the willow.

The nature and value of these little compositions may be gathered from a few extracts. An ant found a grain of millet-seed ; the latter, feeling itself grasped, cried out, " If you will only be good enough to allow me to accomplish my destiny (to multiply) I will give you a hundred beings like myself." And so it was arranged ! A plant complains of the old dried post they have set beside it, and of the withered trunks with which she is surrounded. The one holds her upright, the others protect her from uncomfortable neighbours. A razor being taken one day out of the handle which encased it and laid in the sun, saw its body reflect the sunlight, and became puffed up with pride. Thinking it over he said to himself, " Shall I return to the shop from which I came a while ago ? Certainly not ! " So he hid for several months, but coming out at last into the daylight, he perceived that he looked like a rusty saw. . . . This is what happens to people who give themselves up to idleness, instead of to the proper exercise of their powers. Like the razor they lose their edge, and the rust of ignorance destroys their form.

The *Prophecies*, or rather the *Enigmas*, form one of the strangest sections of Leonardo's writings. They belong to the class of subtle cryptograms characteristic of the Renaissance, and are worthy prototypes of those *Emblems* to which Alciati was soon to give so great

a vogue. Here again we encounter ants, bees, rams, cows, goats, donkeys, nuts, olives, chestnuts, cats, mice, etc. "We shall see," says Leonardo, "the nourishment of animals entering through their skin without passing through the mouth, and coming out at the opposite side to fall on the ground (Explanation : sieves).—The bones of the dead decide the fortunes of those who handle them by their rapid movements (dice)."

Here again we have to do with an old and well-known publication, for we find at least one of Leonardo's enigmas in the *Notti* of his compatriot Straparola, who issued his *Sonetti, Strambotti, Epistole et Capitoli* as early as 1508. The sonnet which concludes the third story of the fifth *Notte* runs upon the transformation into dice of dead men's bones.

We may judge from these few extracts how interesting the poems in prose of Leonardo are, and how, if the plastic conciseness and stirring eloquence of Michelangelo are absent, we find instead a great wealth of imagery, and the art of rendering in words effects which had previously been confined to painting. Everything in them is sincerely felt and observed, qualities too rare in the refined and artificial literature of sixteenth-century Italy to be passed over in silence.

Side by side with the poet we find the moralist and thinker.

In the *Codex Atlanticus* (fol. ii) we find this maxim, touched a little with bitterness, set down in connection with an instrument for measuring time : "We must make this instrument in order to divide the hours, so that this life of misery may not be entirely wasted, and that our memory may not fade from the minds of men." (Richter, vol. ii., p. 293—297.)

"Much greater than the glory reflected upon mortals by their wealth is that which comes from virtue (or talent). How many princes and emperors have disappeared and are forgotten! . . . If you excuse yourself by invoking the necessity for providing for your children, well, they do not require very much ; act so that they will be nourished by their virtues, for these are faithful riches which only quit us with life. If you put forward the necessity for

laying up funds against your own old age, remember that the study of virtue will never fail you, but will keep you always young, for the home of virtue is full of dreams and illusions (cap. 25)." Elsewhere he says: "Every ill leaves a pang in the memory, except the supreme ill, death, which destroys memory together with life."<sup>1</sup> We may also quote this ingenious comparison: "A vase may be mended if you break it before it goes to the oven; afterwards, all repairs are impossible."<sup>2</sup> Everywhere we find the noblest spirituality, and that a spirituality founded upon the widest scientific exploration undertaken by any human head since the days of Aristotle; at one time, he proclaims "that our bodies are subject to heaven, and that heaven itself is subject to the mind;"<sup>3</sup> at another, "that mortal beauty passes away, but that a creation of art endures."<sup>4</sup>

I need not carry my analysis farther. I have said enough to show how great a place letters occupied in a mind which might well have been filled by art on the one hand, and science or philosophy on the other. Encyclopædic as the Leonardo we used to know was, he was yet incomplete; we have now learnt that he attacked the apparently impossible in order to extend his means of expression, and that he succeeded. If Michelangelo the poet conquers our admiration by the wild energy of his style, Leonardo creeps into our affections by the sweetness and serenity of his. His triumph is in descriptive poetry, but he also knows how to inform his maxims with an eloquence which is at once penetrating and familiar.

Here, unless I am mistaken, he introduced a new note into the literature of the Italian Renaissance. The reader will forgive me for having insisted upon it at such length. It is impossible to be indifferent to any thing which throws additional light on such a man as Leonardo da Vinci.

The completion of M. Charles Ravaisson-Mollien's great work

<sup>1</sup> Richter, vol. ii., p. 29, C.A. 336.

<sup>2</sup> *Ibid.*, p. 375.

<sup>3</sup> Beltrami, fol. 65.

<sup>4</sup> "Cosa bella mortal passa e non d'arte" (Richter, vol. i., p. 326). We must read the *Vergine delle Rocce* to find how brilliant these somewhat hazy axioms can become when treated by such a virtuoso as Gabriele d'Annunzio.

of transcribing, translating, and annotating the rich collection of Leonardo's manuscripts preserved in France, allows us at last to solve a problem which has in these latter days greatly stirred the curiosity of his admirers. Some eight or ten years ago, the hypothesis started by Dr. Richter, that at one time Leonardo was converted to Mohammedanism, threw pious souls into no little perturbation. Let us endeavour, with the help of his writings and of certain characteristic features of his career, to determine what Leonardo's religious convictions really were.

To begin with : even if it could be shown—and this is precisely one of the points most in dispute—that Leonardo had broken with the teachings of the Church, it would still be none the less certain that he was a deist, and not an atheist or materialist.

Doubts of Leonardo's orthodoxy are very old. As early as the middle of the sixteenth century, Vasari spoke of his "capricci nel filosofar delle cose naturale," adding that the author of the *Last Supper* "had taken up such heretical notions that he really belonged to no religion, and, in short, that he laid more store by his quality as a philosopher than as a Christian."<sup>1</sup> But on more careful examination the biographer seems to have recognised the slight foundation upon which his assertions rested, for he left them out of his second edition, published in 1588.

Devotional formulæ and the external practices of religion make it difficult to penetrate very far into men's real consciences ; but it may safely be affirmed that impiety, in the true sense, was rare in the times with which we are dealing.<sup>2</sup> The Italians of the sixteenth century fell rather into heresy, in itself a strong manifestation of religious sentiments, and not, as some have asserted, into "free-thinking." If we look at those about Leonardo, what do we see? Botticelli, the soft and tender Botticelli, came perilously near the stake when he lent his brush to the expression of Matteo Palmieri's

<sup>1</sup> "Per il che fece nell' animo, uno concetto sì eretico che e' non si accostava a qualsi voglia religione, stimando per avventura più lo esser filosofo che cristiano."

<sup>2</sup> That of Perugino, whose Madonnas were so devotional, might be quoted on the other side.

theories on the nature of angels. On another occasion the same artist risked an audacious repartee, but he was not slow to make amends, and he ended his life in an odour of contrition which edified his contemporaries. We know that another friend of Leonardo, his fellow-pupil, Lorenzo di Credi, was famous all through his life for piety. But these masters, who were nothing but painters, are not to be compared with him, for intellectual scope and power.

Leonardo over and over again reverts to the benevolence and grandeur of the Supreme Being. He names him with emotion. He celebrates the justice of the Creator, of the "primo motore" who had willed that no force should lack the necessary qualities for the work it had to do. This declaration has been justly compared to a passage in Leibnitz: "The supreme wisdom of God led Him to choose those laws of movement which were in closest agreement with abstract and metaphysical reasoning."<sup>1</sup> Elsewhere we find Leonardo exclaiming, "I obey Thee, Lord, in the first place through the love it is but reasonable

<sup>1</sup> Séailles, *Revue politique et littéraire*, 1881, p. 629.—Cf. *Léonard de Vinci, l'Artiste et le Savant*, by the same author, p. 317.



MONUMENT OF LODOVICO SFORZA.  
(The Certosa, Pavia.)

I should feel for Thee; in the second, because Thou canst lengthen or shorten human life at Thy pleasure"; again, we find him saying, "Thou, O God, Who sellest us all good things at the price of labour."<sup>1</sup>

Declarations like these discount the importance of the following paradox upon idolatry, on which theories of Leonardo's philosophical audacity have been based. "I wish I had words to blame those who think we ought to adore men rather than the sun, as I do not see a greater or more admirable body in the whole universe than the latter, which, with its light, illuminates the celestial bodies which are sprinkled over the firmament. All souls proceed from it, because all the heat which is in living animals comes from their souls. In the whole universe there is no other heat or light, as I shall demonstrate in my fourth book, and certainly those who have desired to worship men as gods—Jupiter, Saturn, Mars, and others like them—have made a great mistake, for we can see that even if a man were as large as our world, he would, in the universe, seem only like the very smallest star, which looks merely like a point, and, moreover, that he is mortal, and rots in his tomb."<sup>2</sup>

To understand such a state of mind we must place ourselves at the point of view of the Italy of the Renaissance, and take account of the indolence, "the vis inertiae," which led thinkers and scholars as well as artists to respect religious things. Like his contemporaries, Leonardo bows before the dogmas taught him in his childhood. "I leave on one side," he says somewhere, "the sacred writings, seeing that they are supreme truth" (*lascio star le lettere incoronate, perche sono sommo verità* [Richter, vol. ii., § 837]).

But when, by the fortune of study, he is driven to choose between accepted beliefs and the conclusions to which his investigations lead, he dismisses all but the truth from his mind. The Church teaches that the world was created 5,288 years before the birth of Christ, but Leonardo counts by hundreds of thousands of years; he agrees that the visible action of the Po upon the valley through which it flows must have required two thousand centuries.<sup>3</sup>

<sup>1</sup> Richter, vol. ii., p. 285.

<sup>2</sup> Ch. Ravaisson-Mollien, *Les Manuscrits (F)*, fol. iv., verso.

<sup>3</sup> Elsewhere he speaks of the invention of astrology as having taken place 57,000 years before the Trojan War (Richter, vol. ii., p. 171).

Leonardo's researches in geology led him to touch upon the gravest problems of Biblical history; Noah's deluge, was it a universal deluge or was it not? His answer is categorical: "We read in the Bible that the Deluge was caused by forty days and forty nights of rain, and that the mass of water rose ten cubits above the highest mountain in the world. If thus it really took place and the rain was universal, it must have covered our globe, which has the form of a sphere. Now the surface of a sphere is at every point equally distant from the centre; in these conditions it was impossible for the water to run away, for water can only flow downwards. How then could the water of this tremendous deluge run away, if it is shown that it could not move? And if it did flow off, how did it begin to move, if it did not move upwards? Here then we have no natural explanations: we must either take refuge in the supposition of a miracle, or declare that the water evaporated under the heat of the sun."<sup>1</sup>

Let us turn to the attitude of Leonardo towards Christianity. We cannot doubt that, although he respected the beliefs in which he had been brought up (as his proceedings with regard to the *Last Supper*, his scruples in completing the figure of Christ; his conversation with Zenale, etc., show), the founder of the Milanese Academy betrays a certain independence of mind, and shows that he attached more importance to works than to dogmas.

The *Prophecies* or *Enigmas* contain a certain number of allusions, which are occasionally a little indiscreet: "Who are those who believe in the Son, but only build churches to the Mother?" Answer. "The Christians." "What mean the lamentations which take place among all the great nations of Europe over the death of a single man slain in the East?" Answer. "The mourning of Good Friday." "Who are those who, being dead, provide food after a thousand years for many who live?" Answer. "The religion of the monks, who live upon the saints so long dead." "I see Christ again sold, and crucified, and his saints martyred." Answer. "Crucifixes put up for sale."<sup>2</sup>

<sup>1</sup> Richter, vol. ii., pp. 208-209.

<sup>2</sup> Richter, vol. ii., p. 369. M. Charles Levêque has perhaps given too much significance to this passage in saying that it shows Leonardo to have been indignant at

One section—the seventy-seventh—of the *Trattato* is devoted to discussing the observation of saints' days.<sup>1</sup> Leonardo is severe



AN ANGEL. SIDE PICTURE FOR AN ALTAR-PIECE. ASCRIBED TO AMBROGIO DE PREDIS.

(National Gallery, London.)

upon hypocrites, and does not hesitate to let us see that, in his opinion, the spirit is vastly more important than the letter in matters of religion. "Among the host of fools we find a certain section called hypocrites, who are continually exercising their ingenuity to deceive themselves and others, but principally others. In reality they deceive themselves more than they do their neighbours. I am alluding to such people as those who blame painters for devoting saints' days to the study of matters having to do with knowledge of nature, and for taking pains to acquire as much of that knowledge as they can."

Leonardo seems to have hugged a certain prejudice against the

the profanation of sacred objects (*Journal des Savants*, 1890, p. 145). Michelangelo, indeed, groans over the profanation of such objects: "qua si fa elmi di calici e spade." Guasti, *Le Poesie di Michelangelo*, p. 157.)

<sup>1</sup> The rules of the artists' corporations strictly forbade work to be done on Sundays and saints' days. With some corporations more than a hundred days were thus affected, and it is quite possible that Leonardo may have been fined by one or another of them.



"regular" clergy. We find him indulging in such exclamations as this : "Farisei, frati santi, vol dire"—"Pharisees, that is to say, monks."

Elsewhere he declares that many of them have made a trade of deceiving the foolish multitude with false miracles<sup>1</sup>.

"What," he asks in his *Prophecies*, "are the false coins which help those to triumph who spend them?" and he answers, "the monks, who, spending nothing but words, receive great riches, and give Paradise."<sup>2</sup> He girds, too, against the workers of false miracles: "and many make a trade of deceptions and sham miracles, cheating the silly crowd, and if no one showed that he understood their deceptions, they would make a good thing of them."<sup>3</sup>

Compared to these attacks the following is relatively mild. "A priest, perambulating his parish on Easter Saturday,

sprinkled a picture on which a painter was at work with holy water; to the latter, who demanded what that was for, the priest answered that



AN ANGEL. SIDE PICTURE FOR AN ALTAR-PIECE ASCRIBED TO AMBROGIO DE PREDIS.

(National Gallery, London.)

<sup>1</sup> Richter, vol. ii., p. 302.

<sup>2</sup> Richter, vol. ii., p. 363.—Cf. p. 364.

<sup>3</sup> Ravaisson-Mollien, *Les Manuscrits*, vol. iv., fol. 5.

God was in the habit of restoring one a hundredfold for all the good one did here below. Scarcely had the priest emerged from the house before the painter upset a bucket of water on his head, crying : ' there you are, rewarded a hundredfold for the good you have done me with your holy water, which has half-spoiled my picture ! ' " <sup>1</sup>

With a man like this morality must have counted for at least as much as faith. The writings of Leonardo abound, in fact, with precepts as simple in their teaching as they are eloquent in expression. Let us take a few examples. " Falsehood is so vile that if it spoke well of God, it would take something from the grace of His divinity, while truth is so excellent that when applied to the smallest things, it makes them noble." <sup>2</sup> " Intellectual ardour drives away luxury"— " la passione dell' animo caccia via la lussuria." <sup>3</sup> Leonardo's contempt for money breaks out in many places : " Money, dirt ! " he cries ; again, " Oh, poverty of man ! Of how many things do you become the slave for the sake of money ! "

Like so many upright natures, he inclined to misanthropy as time went on, till, in the end, bitterness took the place of serenity. <sup>4</sup>

It is plain from all these different pieces of evidence, that Leonardo, without displaying any special marks of devotion or taking part in theological discussions, submitted with docility to the demands of public religion, as, in fact, every one had to do, who did not wish to become acquainted with the stake. But a conduct which, with others, might have been the result of calculation sprang, with him, from the tolerance we look for in all superior minds.

The pictures and drawings of Leonardo allow us to see a little deeper still into the problem ; they show that except in his rendering of the *Last Supper*, he took greater liberties with sacred iconography than any other artist. Not content with suppressing the nimbi and other traditional attributes of holiness, he represents

<sup>1</sup> Richter, vol. ii., p. 347. See also p. 349, and *Codex Atlanticus*, fol. 469-470.

<sup>2</sup> Richter, vol. ii., p. 222.

<sup>3</sup> *Saggio, delle Opere di Leonardo da Vinci*, p. 8.

<sup>4</sup> *Codex Atlanticus*, fol. 328.—Müller-Walde, *Jahrbuch* for 1897, p. 109.—It is impossible to avoid being struck by Leonardo's habitual decorum and by his horror of licentious language. Once only does he indulge in a pleasantry of doubtful taste (Manuscript F., at the Institut de France, verso of cover).

the actors in the sacred history in attitudes which, though full of poetry and tenderness, are inconsistent with the terrible mysteries of religion: the Divine Child teasing a lamb or a cat, the Virgin sitting on her mother's knees, and so on. And yet, to his contemporaries, the pictures of Leonardo seemed inspired with the purest and most profound religious sentiment. In a letter addressed to the Marchesa Isabella d'Este and published lately by M. Charles Yriarte, Father Pietro da Nuvolaria discovers all kinds of symbolical meanings in the *Saint Anne* of the Louvre. "He has imagined a Christ about one year old, escaping from his mother's arms to seize and embrace a lamb. Rising from her mother's lap, the Virgin attempts to separate her child and the lamb, an animal not to be sacrificed, but which figures the Passion of Christ. Saint Anne seems about to make a movement towards restraining her daughter. This, perhaps, is an allusion to the Church, which would not prevent the Passion of Christ." The Marchesa Isabella, on her part, bears witness to the essentially gentle and pious character of Leonardo's religious pictures.<sup>1</sup>

If I were dealing with any other artist but da Vinci, who was at least as much a thinker and man of science as he was a painter, I should not have insisted at such length upon his beliefs, but should have been content to repeat the maxim, that the style is the man. The pictures of Leonardo are religious in the highest degree, not, of course, in that ascetic sense in which alone thoroughgoing partisans of the Middle Ages see religious inspiration, but in that idyllic spirit by which more than one page of the Gospels themselves are inspired. We must admit that one aspect of Christian art is founded on maternal and filial affection, and no man can have excited the emotions of more mothers and children than Leonardo.

Leonardo's philosophy has been so well analysed by M. Séailles<sup>2</sup> that I need not say more of it here. I shall be satisfied with examining one problem to which my predecessors have paid but scant attention: what influence did Marsilio Ficino, the champion of

<sup>1</sup> "Uno quadretto della Madonna, devoto e dolce come è il suo naturale." (*Letter of Isabella d'Este*, March 27, 1501.)

<sup>2</sup> *Léonard de Vinci, l'Artiste et la Savant.*

neo-platonic philosophy, exercise over Leonardo? The *Theologia platonica* had appeared at Florence in 1482, that is, before, Leonardo had quitted his native city for Milan; his ideas, therefore, might have been strongly affected by it, but as a fact, they were not. Platonic philosophy seems, indeed, to have counted for little in Leonardo's mind. In M. Ravaisson-Mollien's twelve volumes, Plato is only once quoted (MS. F, fol. 59), and that in connection with a geometrical problem; <sup>1</sup> Socrates, too, is only mentioned once (MS. F, fol. 4), and then, as M. Charles Levêque has shown, Leonardo ascribes to him an opinion really formulated by Anaxagoras.

We know, however, that the *Timæas* of Plato was not unknown to Leonardo's collaborator, Luca Pacioli, for there he found certain Pythagorical doctrines, such as the parallelism between regular bodies and the elements, the notion that the triangle played a great part in the formation of the world, etc.

On the other hand, the name of Aristotle occurs continually.<sup>2</sup> "The attractive parts of Aristotle's writings for Leonardo, says M. Levêque, were those treating of physics, of astronomy, in a word, of Nature. The Greek philosopher's *Organum*, more or less disfigured by the Middle Ages, seems scarcely to have arrested him at all. He broke no lance with logic. We do not find him saying with Bacon, "Rejiciamus igitur syllogismum," or treating as sophists the greatest of the Greek philosophers, as the Englishman loved to do. In estimating his feeling for Aristotle, we may reasonably suspect that while he neglected the metaphysician he saw the observer who loomed behind him. In these days no one doubts that a naturalist, a physiologist, a zoologist, and an experimental anatomist were all combined with the metaphysician in Aristotle."<sup>3</sup>

<sup>1</sup> Several points of apparent contact between the head of the Academy of Athens and that of the Milanese Academy must be put down rather to accident than intention. Thus we find Plato comparing the soul to the sound of a lyre, and asking whether, when the lyre is broken, the sound dies with it. Leonardo, on his part, declares that the decomposition of the body does not involve that of the soul, and that the soul in the body behaves like the wind in an organ: if a pipe bursts, the action of the wind ceases.

<sup>2</sup> MS. D, fol. 84, v°; MS. I, fol. 130, v°; MS. K, fol. 52, v°; MS. M, fol. 62, etc. Govi exaggerates when he says, "Liberò da ogni influo Aristotelico o Platonico." (*Saggio*, p. 7.)

<sup>3</sup> *Journal des Savants*, 1890, p. 139.



LODOVICO IL MORO, BEATRICE D'ESTE AND THEIR CHILDREN AT THE FEET OF THE VIRGIN.  
ASCRIBED TO ZENALE.  
(The Brera, Milan.)



Leonardo's theories had a tendency towards transcendental philosophy, for he taught that our bodies are in subjection to heaven, and heaven in subjection to the spirit.<sup>1</sup> It is difficult to evolve anything like a system from such a collection of floating and contradictory assertions. Does he not endeavour to define the spirit as "a power mingled with the body, because it, the power, is unable to govern itself by itself or even to move in any way, and if you say that it does govern itself, that is impossible in the midst of the elements, for if the spirit is an incorporeal quantity, such a quantity is called a vacuum, and a vacuum does not exist in nature. Suppose it to form, it would be at once filled by the ruin of the element in which it was formed."

"In Leonardo's science," says M. Séailles, "mind is not annihilated by matter. It seeks and finds mind in matter. A colourless philosophy was alien to his mobile intellect, which here again reconciled factors apparently irreconcilable, analysis and synthesis, a taste for the contingent, and a sense of the necessary." Is not the relation of soul and body, in the human microcosm, an exact parallel in the Cosmos to that of Nature and the vast body she inhabits? "He notes that painters are inclined to create figures resembling themselves." The body is the first work of the soul. In it she realises her idea of the human form: it becomes her type and exemplar. "Translated into modern language, Leonardo's creed may be summed up thus: Mechanism implies dynamics. All movement, finally analysed, will be seen to have its origin in spiritual activity."

Elsewhere, after having declared that "i sensi sono terrestri, la ragione sta fuor di quelli, quando contemplo la," he proclaims that "ogni nostra cognitione principia da sentimenti," anticipating the maxim of the Stoics that "nihil est in intellectu quod non fuerit prius in sensu."<sup>2</sup>

Leonardo's classification of the senses is most curious.

In the first place comes sight, which receives impressions in the form of straight lines arranged in the shape of a pyramid, and can take note both of the cause and the origin of its impressions. Then comes hearing, which is often deceived as to the distance of sounds and

<sup>1</sup> Beltrami, *Il Codice . . . del Principe Trivulzio*, fol 65.

<sup>2</sup> See Richter, vol. ii. pp. 287-288, 305-306.



the quarter from which they come (as in the case of an echo). Smell is still more uncertain as to the origin of those odours which are its exciting causes. Finally, taste and touch can only exercise their functions by means of material contact.<sup>1</sup>

Elsewhere again, the painter indulges in transcendental discussions of time, of the past and the future.<sup>2</sup> Kant could not have reasoned better.

In short, Leonardo had the the sanest of all intellects in whatever had to do with nature. In him we find no hint of pessimism. He tries to understand and admire the whole work of the Creator. Once indeed he confesses that to many animals Nature is rather a cruel stepmother than a real parent, though with some, he hastens to add, she is pitiful enough.<sup>3</sup>

<sup>1</sup> *Trattato della Pittura*, cap. 2.

<sup>2</sup> Richter, vol. ii. p. 308-309.

<sup>3</sup> Richter, vol. ii. pp. 131, 310-311.



STUDY OF THE INFANT CHRIST AND THE LITTLE S. JOHN.

(Windsor Library.)





ALLEGORICAL COMPOSITION, DATED 1516.  
(Windsor Library.)

### CHAPTER III

THE SAVANT—DID THE STUDY OF ANTIQUITY DELAY THE PROGRESS OF SCIENCE?—WAS LEONARDO A MAGIAN?—HIS SCIENTIFIC METHODS—HIS WORK AS A MATHEMATICIAN—STUDIES IN PHYSICS—INVENTION OF THE CAMERA OBSCURA—RESEARCHES IN NATURAL HISTORY—LEONARDO AS ENGINEER AND MECHANICIAN.

“Rerum cognoscere causas.”  
VIRGIL.



STUDY OF AN OLD MAN'S HEAD.  
(Windsor Library.)

OUR century is blamed for looking backwards too much in matters of art; would it not be more reasonable to find fault with it for not giving enough importance to the past in scientific matters? It is only at rare intervals that the works of the great discoverers have attracted the curiosity of the modern student. For knowledge on such points we are reduced to the popular and hasty works—to say no more—of Louis Figuier. One really experienced student, however, M. Berthelot, has lately proved

that retrospective investigations are not inconsistent with originality, and that it is easy to be just to forerunners, even while opening up new paths for science. This, in fact, is one of the most fertile lessons given to us by the illustrious historian of alchemy.

The indifference of the scientific world—with a few exceptions, such as that to which I have just alluded—is comprehensible, if not excusable. The discoveries of former times were nothing less than the first courses of the building to which the present generation believes it has affixed the capstone. How much happier are poets and artists than discoverers! Their masterpieces shine with eternal youth, and we think ourselves fortunate if now and then we contrive to rise to their level. The completest and most suggestive genius we can point to on the threshold of the modern era is an instance in point; the world has exalted the artist to the skies, and left the man of science in the cold shade of obscurity.

And yet the glory of Leonardo has this peculiarity, that no savant of our own time can take umbrage at it. If the study of his manuscripts enables us to antedate by two, or, occasionally, by three or four centuries, many capital discoveries, the rights of his successors remain none the less intact. This requires explanation. Leonardo's manuscripts remained unpublished until within the last few years,<sup>1</sup> so that the laws he established or at least divined had all to be independently discovered.

The paths of great poets and great artists have seldom been strewn with roses, but great discoverers have almost invariably met the fate of martyrs. The names of Roger Bacon and Raimondo Lulli, of Ramus, of Michel Servet and Bernard Palissy, of Galileo and Denis Papin, to say nothing of Archimedes, Christopher Columbus, and many others, recall to our minds the violence of the executioner and the sufferings of his victims. And as if the rage of man were not enough, the elements have more than once conspired against them.

<sup>1</sup> It is scarcely necessary to again draw attention to the works of Dr. Richter, Charles Ravaisson-Mollien, Beltrami, Sabachnikoff, Piumati, Rouveyre, and Mathias Duval, and to that edition of the *Codex Atlanticus*, which has been in course of publication since 1894 under the auspices of the Roman Academy of the "Lincei"; we should remind our readers, too, of those who first embarked on the study of Leonardo's scientific remains, namely, Venturi, Libri, and Govi.

Da Vinci did not escape the common lot, but, having kept his secrets to himself, he suffered less than others, his expiation being exile in his old age; a gilded exile, it is true, but penance none the less.

Yet Leonardo had no right to complain. Justice presides over matters of science more surely, even, than over those of ordinary life. It was but fair and natural that his contemporaries should have failed to show their gratitude to a man who kept so many secrets and important discoveries to himself. Leonardo worked for his own personal satisfaction; he could expect nothing but indifference at the hands of those he disdained. It is left for posterity to liquidate the debt contracted by the cause of pure science. And, indeed, it is impossible to acquit Leonardo of blame in this connection. Did he think himself immortal? At the age of sixty, he had taken no measures for the publication of his works. He paid dearly for his negligence. It is evident that his strength of character was not equal to his loftiness of intellect. We need not be surprised to find that it has been left to the nineteenth century to do tardy justice to the man of genius who divined a whole world of fundamental truth.

An alliance between art and science was no new thing in Italy. Minds trained in the incomparable gymnasium of classic education could attack the most various tasks without danger of a check. In such an enterprise the painter of the *Last Supper* and the sculptor of the Sforza statue could justify himself by the example of many a famous Italian. Brunellesco had been an ardent student of mathematics; Piero della Francesca of geometry<sup>1</sup>; L. B. Alberti had composed the *Ludi Matematici* and invented a way of measuring the depth of the sea in places where the lead could not be used; he had also busied himself—"de motibus ponderis"—on the movements of weights.<sup>2</sup> So, too, among the contemporaries of Leonardo, Andrea

<sup>1</sup> Leonardo alludes on one occasion to a "Maestro Piero del Borgo," evidently Piero della Francesca (Richter, vol. ii. p. 437).

<sup>2</sup> Mancini, *Vita di Leon Battista Alberti*, pp. 317 *et seq.*; Florence, 1882. Leonardo quotes Alberti in connection with his system for calculating the rapidity of ships under sail (MS. F, fol. 2; G, fol. 54). He possessed, moreover, a manuscript which has passed from Lord Ashburnham to the Laurenziana at Florence, which treats of fortresses, of

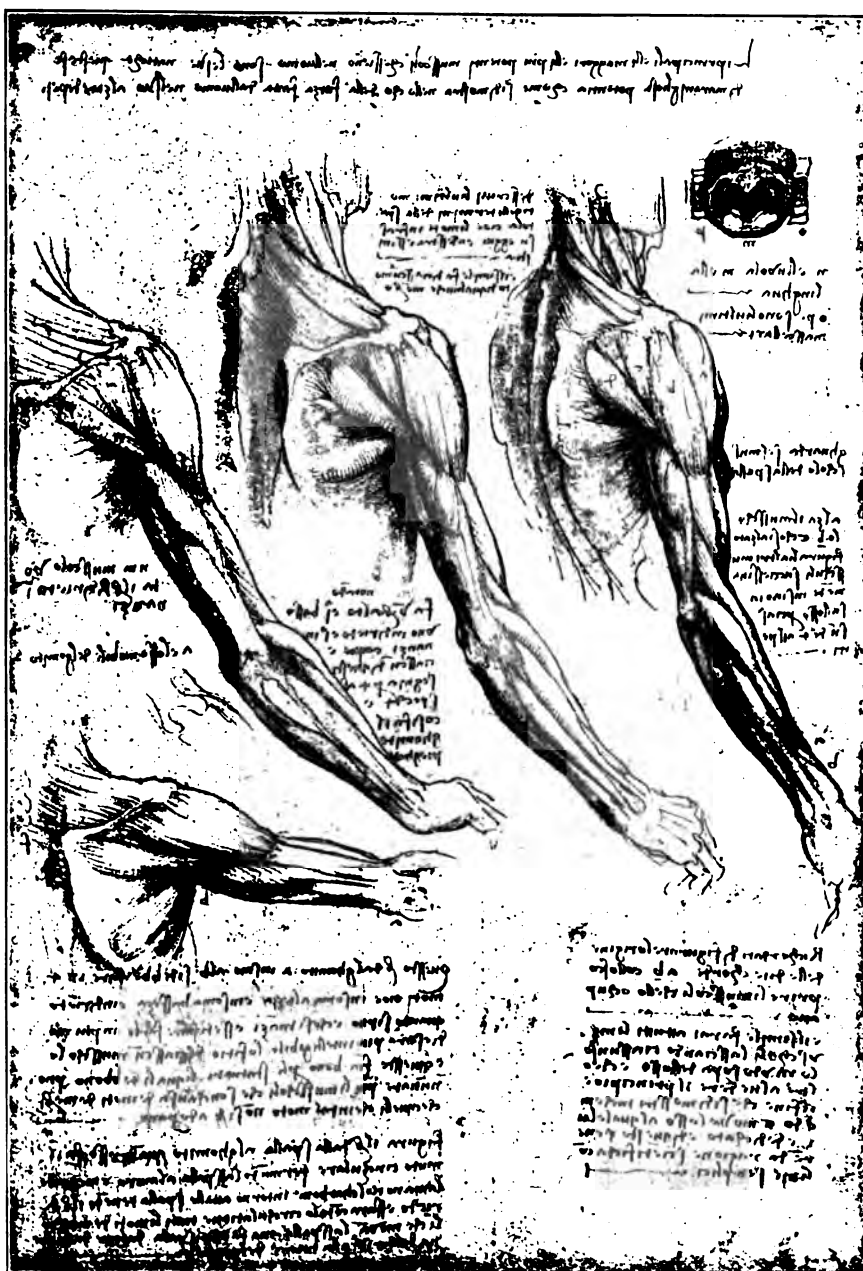
Sansovino was a student of cosmography, Peruzzi of astrology and mathematics. Nor was the idea of compiling and publishing treatises on the arts a new one. Alberti's work on Architecture had appeared in 1485, Gaurico's on Sculpture in 1504, Pacioli's on Proportion in 1509, and Fra Giocondo's edition of Vitruvius in 1511.

Was Leonardo's pronounced vocation for scientific research a help or a hindrance to him as an artist? It is usual to quote him as an example of the possibilities of art and science allied. In him, it is affirmed, active genius received a new impetus from the analytic faculty; reason reinforced the imagination and the emotions. But was this the case? Harassed by his perpetual desire to investigate, Leonardo's inspiration was disturbed at every moment. No artist hesitated more; none has left more unfinished masterpieces. And even among these, how many are there, with the exception of the *Last Supper*, which express a complete idea, strong, generous, and concrete, as do Raphael's creations? He has left us portraits (busts only), Holy Families, fragments of landscape, all admirable, and all showing clearly that, if scientific application had finally developed in him the most exquisite worship of form, it had on the other hand, robbed him of the power of synthetic vision, of creating works at once pictorial and literary, and presenting them to the admiration of the public in all the vivid warmth of instant inspiration. It was his scientific prepossession, too, which made him seek the solution of the laws of chiaroscuro, and brown tonalities, to the detriment of that splendour of colour revealed by the Venetians.

Before describing Leonardo's method of work and a few of his discoveries—to enumerate them all would be impossible—it is advisable to inquire how he set about his work, and how he contrived to master, in so remarkable a degree, the boundless domain of mathematical, physical, and natural science.

All evidence is unanimous in showing that as a child he had rivers, of proportions, of geometry, of mills, of waters, of metals, of the military art, of religious architecture, etc. On this manuscript—falsely attributed first to Francesco di Giorgio Martini and afterwards to Da Vinci himself—Leonardo has written a few notes. It is really a compilation from the works of L. B. Alberti (Mancini, *di un Codice . . . con alcuni Ricordi autografi di Leonardo da Vinci*, Firenze, 1885).

a gift for the exact sciences. His entry into Verrocchio's studio



ANATOMICAL SKETCHES. DATED 1510.

(Windsor Library.)

confirmed these tastes, which, in him, were combined with an irresistible vocation for art. We know that Verrocchio was a passionate

student of geometry and perspective, but whatever he may have done for his pupil, we know the latter was above all things the son of his works. It is not even certain that, at this time, Verrocchio had seriously embarked on scientific experiments. Florentine culture, so pre-eminent in matters of art and literature, had not yet reached a like superiority in the domain of science. Attached to the doctrines of Plato, of which the Medici were adherents, and to which their *protégé*, Marsilio Ficino, had given new life, the Florentine looked for beauty rather than for truth; and even when he made the latter his aim, his preference was given to absolute laws, such as those of mathematics, rather than to those relative solutions on which natural science reposes. It was by arithmetic, perspective, and astronomy that not only Verrocchio, but Leone Battista Alberti, Piero della Francesca, and Toscanelli, who prepared the way for Columbus, were moved to enthusiasm.

Alberti is the representative "par excellence" of all these tendencies. He excels in the exact sciences; he invents the most ingenious machines for his own diversion; but when it comes to natural science, he suffers eclipse. Here I may be met by a reminder of the important developments made by anatomical studies at Florence; but I answer that their experts were not savants, but sculptors and painters, and that scientific exegesis had little enough to do with their dissections. We must not forget, either, that the first anatomical handbooks, A. Benedetti's manual (Pavia, 1478), and the *Fasciculus Medicinæ* of Ketham (Venice) appeared in Northern Italy.

At this period, as both before and since, Florence triumphed by virtue of her untiring spirit of criticism (which degenerated too often into raillery and scepticism), and her methodical and strenuous work. She lacked the candour, the audacity, and the illusions—I might almost say the hallucinations—of youth. She placed sentiment and imagination in the second rank. Now, whatever may be said, it is quite certain that without a slight touch, at least, of the feverish and the morbid, even men of science will never arrive at those inspirations and intuitions which so often distance reason and clear centuries at a

bound. Just as the Florentine school of painting was above all things a school of design, so the scientific men of Florence, not even excepting Galileo, shine by the rigour of their observation and the wisdom of their deductions. But such was the intellectual vitality of Italy, even when the seventeenth century was well on its way, that if for a moment activity died down in one province it was rekindled in another. Thus one sees, on an apparently exhausted soil, the Neapolitan school of philosophy spring up to seize the torch dropped in the north, and to give the world men like Telesio, Giordano Bruno, Campanella, and Vanini.

North Italy played the part of leaven in the case of Leonardo; it was contact with the Milanese that drew out his scientific powers. His new fellow-citizens had neither the lofty culture of the Florentines nor their spiritual aspirations. They adhered, in fact, to doctrines diametrically opposed to those of the Tuscans. To the altar of Plato they opposed that of Aristotle, and of Avicenna and Averroes, his Arab interpreters.<sup>1</sup> In the seventeenth century these leaders still counted numerous followers among the professors of Pavia, Padua, and Bologna.<sup>2</sup> They were, if I am not mistaken, the true initiators of Leonardo. They taught him to observe as well as to reflect, and to alternate experiments with abstract thinking. Their disciple, independent as he is, constantly invokes their evidence, although he does not hesitate to expose any errors into which they seem to him to have fallen.

In the exact sciences, classical antiquity was by no means the only source of progress. A whole section of mathematics, and that not the least important, owed nothing to the Greeks, for numeration by means of ciphers came to us from the Hindoos through the Arabs. It was, moreover, by an Italian, Leonardo Pisano, called Fibonacci, the greatest mathematician of the Middle Ages, that these ciphers were made generally known.<sup>3</sup>

On the other hand the Ptolemaic system of cosmography weighed

<sup>1</sup> Leonardo quotes Avicenna more than once (Richter, vol. ii. pp. 429, 431).

<sup>2</sup> This Renan has abundantly proved in his book on Averroes and Averröism.

<sup>3</sup> *Liber Abaci*, published in 1202. See Rudio, *Ueber den Antheil der mathematischen Wissenschaften an der Kultur der Renaissance*, Hamburg, 1892, p. 16.

heavily on Italian science and paralysed all progress. It was a foreign student in the Italian universities, Copernicus, who at last threw off the yoke.

Yet even if the Italians so easily put themselves at the head of civilisation, was it not owing to the rich legacies from the classic centuries which they had preserved, while the rest of the world was sunk in barbarism? Besides, to place the commencement of the Renaissance in the fifteenth century, when the dreary school of the philologists arose, is to commit an anachronism. The Renaissance began a hundred years before that, with Petrarch.

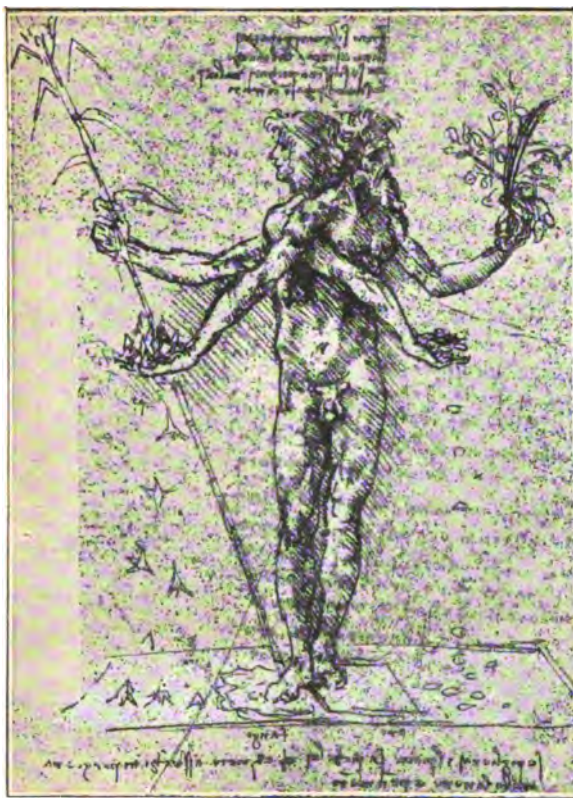
If he had done nothing but enlarge the Florentine horizon by his migration to Upper Italy, Leonardo would have had no cause to regret his change of centre. But the Lombardo-Milanese character, heavy as it seemed, offered other advantages; it was energetic, coherent, and full of latent power. I am in a position to show how much, in one special direction, Leonardo owed to its inspiration or teaching. Until quite recently Leonardo has been credited with all the progress made in his time in hydraulics, and even with the invention of canals! Now Signor Beltrami, the learned Milanese architect and engineer, has lately proved that as early as the twelfth century the Lombards had pressed the Ticino into the service both of irrigation and navigation. From that moment enterprises of the kind were rapidly multiplied, and a vast network of canals was spread over the fertile plains of Lombardy. In short, when Da Vinci appeared at Milan, that is, not before 1480, instead of being called upon to create hydraulics both in theory and practice, he had only to carry on the work of his predecessors, though a mind so gifted as his could not fail to renew it in details, and to enrich it in countless ways.

Here, as in so many other activities, we find the sceptical and initiative spirit, the realistic ferment, breaking into the classic tradition and becoming the chief factor in the Renaissance. Thanks to this tendency, as well as to the special aptitudes of Leonardo, the great renewal of human thought was extended to science as well as to art and poetry.



There is no doubt that Leonardo had already carried his own personal studies and experiments very far before he set to work to appropriate the labours of his predecessors, and to constitute what we should call the bibliography of the subject.

The detractors of the Renaissance—and they are not wanting in these days—affirm that the study of the classic writers and the idolatry of which they were once the object, long paralysed the progress of science. At first sight the example of Leonardo seems to justify their theory, but let us look a little deeper. Retrospective inquiry—a duty with all who really wish to understand what the past has left us—can only destroy initiative in those who possess but little of that faculty.<sup>1</sup> Of this Leonardo himself affords a striking proof. He consults the ancients, but in the right sceptical spirit, accepting their discoveries when they seem to him well founded (what scientist could do otherwise?) but never hesitating to set them aside when experience shows them to be mistaken. Thus he refutes Pliny's theory about the saltiness of the



ALLEGORICAL COMPOSITION. PLEASURE AND PAIN.  
(Christ Church Library, Oxford.)

<sup>1</sup> Take Polydorus Virgilius's *Treatise on Inventions*, for instance. Through this rigmarole of quotations we discern a faith in progress. The author examines the inventions of language, science, art, legislation, agriculture, in fact all the factors of civilisation. If he insists on the part played in these by the ancients, he does not forget to give the moderns credit for the invention of printing, explosives, and musical instruments.

sea, and exhausts his powers of sarcasm over the notions of Epicurus as to the dimensions of the sun. "Let us suppose," he says, "with Epicurus, that the sun's apparent size is its real one; its diameter seeming to be the length of a foot, and the sun going one thousand times its own diameter in the course of the twenty-four hours, it would make a total journey of one thousand feet, say a sixth of a mile. It results that in its whole course, through one day and night, that old slug of a sun would go the sixth of a mile, or at the break-neck speed of twenty-five 'braccia' per hour!" Twenty more examples of Leonardo's independence of antique tradition will be found in the volume of M. Séailles.<sup>1</sup>

It must be allowed that this spirit of revolt and initiative was not exactly a novelty in Christian Europe. As early as the thirteenth century Albertus Magnus, Roger Bacon, Arnould de Villeneuve, and Ramon Lully had submitted the assertions of the ancients to a destructive criticism, and had done their best to throw off the scholastic yoke. But what were these attempts compared to those of their Italian rival? No one had pushed freedom of thought and sincerity of observation so far as he; no one had combined rectitude of judgment and subtlety of analysis so completely. Leonardo is sagacity personified; he seems to be preserved from mistakes of method or of conclusion alike by an instinct which never errs.

Theoretically, such independence and sincerity should do nothing but favour the progress of science; from the point of view of the propagation of ideas, they could only act as a drag. If the savant and philosopher in Leonardo had made the most of the ground won by his predecessors, he would, instead of exhausting himself in the creation of philosophy and science all over again, have been enabled to go on to that work of concentration, co-ordination, and synthesis which the analytical spirit too often led him to neglect. It is evident that we must, to some extent, blame his methods of formulating his opinions for the small effect they had upon his contemporaries. In his want of familiarity with the expository precision to which long

<sup>1</sup> *Léonard de Vinci, L'Artiste et le Savant*, pp. 187 et seq.

practice had accustomed the humanists and their allies, Leonardo was content to embody the results of his studies in what seemed to him their most natural form. Is it surprising, then, that his isolation equalled his originality? "*Væ soli.*" His style was neither striking nor concise; his ideas lacked the system and order which would have imposed them upon the learned bodies of his time. Rather than formulate his axioms and marshal his ideas into a "*corpus*" of doctrine, he chose, in his excess of sincerity, to group his discoveries into modest paragraphs, without pedantry, but also without any philosophical organisation. He was not one of those who think that when they have written a chapter, or a book, they have finished the question. He returned to it again and again, thinking only of science, which continually renews itself from its own bosom. His insatiable curiosity was his only guide. He called continually upon his own sagacity for the solution of problems, or at least for their statement, which, too, is a step towards truth. He made good his way rather by the light of genius than by methodical processes of investigation. Only now and then does he hit upon an argument which is really strict and close, such, for instance, as we find in his discussion of the connection between the Deluge and the shells found on the summits of mountains, or his refutation of the system of Epicurus.

Leonardo was quite alive to these defects of his, and more than once he feels it necessary to justify his studies by some more or less transcendental consideration. Listen to this: "In order to safeguard the greatest gift of nature, which is liberty" (thus speaks the future engineer-in-chief to Cæsar Borgia!), "I know methods of attack and defence against the attempts of ambitious tyrants. And in the first place I shall speak of the situation of ramparts, and shall show how peoples may keep their rulers good and just."

His modesty equalled his ardour—what inventor has ever talked of his discoveries with more humility? "Seeing that I could not choose any subject of great utility or of great pleasantness, for those who have come before me have taken for themselves all useful and necessary themes, I shall act like those who, being poor, arrive last at the fair.

Not being able to procure other merchandise, they take such goods as have not been sold, but have been refused for their slight value. With these goods, despised by the crowd of buyers, I shall make my modest cargo, and shall distribute them, not in the great cities, but in the poor villages, taking the price which such matters are worth."

But on occasion he is ready enough with fit terms to assert the value of his discoveries or to claim proper respect for science:



A SUPPOSED SCENE OF MAGIC.  
(Christ Church Library, Oxford.)

"Inventors, interpreters between man and nature, when compared to trumpeters and heralds of other people's work, should be judged and considered like an object, and the image of that object reflected in a mirror. The one is something by itself, the other is nothing. This (latter) race owes little to nature, for only by accident has it been en-

dowed with the human form, without which it would have been classed among the animals."

We have seen how lavishly nature behaved to Leonardo in the matter of weapons, how well equipped he was for the struggle in which he was about to engage. We have next to learn how he made use of these advantages. Did he proceed on lines thought out in advance, or did he follow the inspirations of the moment?

To hear his profession of faith, one would take him for a systematic inquirer. Does he not insist, with an energy he but seldom shows, on the necessity for thinking things out before attempting to execute? "First of all study science. He whose judgment lags behind his workmanship is a dismal sort of master, but he whose judgment outruns

his hand is on the way to perfection." Elsewhere he compares the man who acts on any other system to a mariner embarking without rudder or compass.

Such maxims are surprising in the man who above all others was the apostle of empiricism. His note-books, which initiate us into his methods of thought, show him writing down with the greatest impartiality his observations, his impressions, his ideas, and even his doubts, just as they presented themselves to his mind. He repeats himself, corrects himself, sometimes even contradicts himself. He puts himself right afterwards by here effacing a passage, and there appending on the margin "falso," or "non è desso." We may imagine how dangerous it would be to look upon these doubts, guesses, and confidences as serious solutions or revelations.



A SUPPOSED SCENE OF MAGIC.  
(British Museum.)

Here, as in other cases, the contradiction between the precepts and practice of Leonardo is conspicuous. Indecision was the dominant factor in his character. It had grown with the variety of his studies, and it prevented him from concentrating his mind for any great length of time in one direction, as well as from asserting his conclusion with the requisite vigour and authority. No one passed with more ease from one subject to another. Yielding to an instinct which had grown with his years, his effort was rather to extend his conquests than to secure them. Such faith and sincerity as he afforded a touching, not to say sublime, spectacle! Without troubling himself about the ridicule which attends premature excursions in art and science, he never ceased to amass materials and to attack all phenomena, great or small, with

the remarkable powers of analysis with which nature had endowed him.

It would be idle to claim a place for Leonardo among those concrete and synthetic geniuses who see a truth without experiment, and formulate it in winged words. His method was that of Darwin : proceeding by extraordinary subtlety of analysis, not fearing to be diffuse, fixing upon some infinitely minute fact, such as the *rôle* of the earthworm in the construction and renewal of the soil, then, by skilful grouping of isolated and apparently unimportant pieces of evidence, leading up to some final law.

This insatiable seeker after truth understood, however, how important it was that his vast accumulation of notes should be rearranged and codified (he has left us as many as ten different versions of a single paragraph !). He worked hard at this task, in 1508, for instance, during a stay in Florence.<sup>1</sup> Unhappily other duties claimed his attention, and he was compelled to endow posterity with a sometimes inextricable tangle, which might fairly be compared to the manuscript of Pascal's *Pensées*.

It must be confessed that these thousands of detailed observations, though collected with so much patience and sagacity, could have but little value until brought into due relation with each other, and vivified by a master mind. The artist-philosopher was quite alive to this necessity, and proclaimed it when he compared theory to the captain and practice to the rank and file : " La scientia è il chapitano e la pratica sono i soldati."<sup>2</sup> It was a no less happy inspiration when, in his conviction that nothing in this world was immutable, he repre-

<sup>1</sup> The following declaration has its value :—" Begun at Florence, in the house of Piero di Braccio Martelli, on the 22nd day of March, 1508. And this is to be a collection without order, taken from many papers which I have copied here, hoping to arrange them later each in its place, according to the subjects of which they may treat. But I believe that before I am at the end of this [task] I shall have to repeat the same things several times : for which, O reader, do not blame me, for the subjects are many, and memory cannot retain them [all] and say, ' I will not write this because I wrote it before.' And if I wished to avoid falling into this fault, it would be necessary in every case when I wanted to copy [a passage] that, not to repeat myself, I should read over all that had gone before ; and all the more since the intervals are long between one time of writing and the next." (Richter, vol. i. p. 12. Cf. Seailles, p. 180.)

<sup>2</sup> MS. no. 1, at the Institut de France, fol. 130.

sented progress by a series of cubes arranged one behind the other, the last overthrowing its neighbour, and this in its turn the next, and so on. "One expels the other"<sup>1</sup> is the legend on the sketch, and to prevent all mistake, Leonardo has added: "These cubes signify the life and the studies of man."

Since Aristotle had completed his 896 problems,<sup>2</sup> no human brain had toiled with such feverish activity to discover the wherefore of all things. Leonardo searched and thought without intermission, in society, in the solitude of his study, during his walks, like the peripatetics.<sup>3</sup> He specially profited by the neighbourhood of the Alps to make frequent excursions, in which the geographer, the hydrographic engineer, the naturalist, the geologist, the meteorologist, and even the painter, could add to his store of knowledge.

And yet in spite of his insatiable curiosity, our first impression is that the Italian had less mental scope than the Greek. That he felt less interest in social and moral questions is not surprising, when we remember that he lacked the vigour given by a classical education. But besides this, he was content to ask no more from his observations and experiments than they could directly give. It never entered his mind to spread over the spiritual world the laws he had discovered in the physical universe. He ran no risk of making science bankrupt. His action, therefore, was infinitely narrower than that of the great thinkers of antiquity. If, like a new Epicurus, he "endeavours to force the temple in which Nature locks up her laws"; if "his heroic ardour drags him out over the flaming walls of the world;" if, in short, "his soul and mind explore the infinite," he never thinks of forging a weapon for himself out of so many revelations, and no

<sup>1</sup> Cf. the proverb, "One nail drives out another."

<sup>2</sup> To appreciate this famous work, the reader should turn to the ingenious and perspicacious study published in the *Journal de Saint Pétersbourg* (1891, no. 279) by Madame Raffalovitch, who has brought as much ability to the study of the Greek philosopher as to that of the Italian savant.

<sup>3</sup> He gives the following example of this: going to Fiesole, he made the following observation: "When a bird with wings spread and tail gathered together wishes to rise, then he strongly opens (?) his wings, and in turning he encloses the wind under his wings, which wind embracing him will push him strongly and make him travel fast, as did the 'cortone' (bird of prey) which I saw on my way to Fiesole at the place called Barbiga, in 1505, on the 14th of March."

Lucretius would ever dream of painting him defying the deity, or spurning the monster Superstition with his feet :

Quare Religio, pedibus subjecta, vicissim  
Obteritur, nos æquat victoria cœlo.

On the contrary, Leonardo takes every opportunity to affirm his belief in the wisdom and goodness of the Supreme Being.

In spite of deficiencies which I have made no attempt to conceal, Da Vinci created the experimental method. The ancients had glimpses of it, but they either practised it ill or not at all. Alexander von Humboldt, who proclaimed him "the greatest physicist of the fifteenth century,"<sup>1</sup> uniting a remarkable knowledge of mathematics with a most admirable intuition of nature," says that, like Bacon, and a century earlier, Leonardo held induction for the only sure method in the natural sciences. Govi, in his turn, shows that Leonardo created the method to which Galileo was, a century later, to owe his greatest discoveries, and Bacon "who taught it without grasping it, the glory of having refounded scientific philosophy."<sup>2</sup>

Hear what Leonardo says himself. "The interpreter of nature," he declares, "is experience; she never deceives us; it is our judgment that sometimes deceives itself, because it looks for effects which experience denies to us." A robust and clear definition, enough by itself to show us that we are dealing not only with a man of fine instinct, but with a thinker and a philosopher.

In spite of the desultory nature of his studies, Leonardo had a horror of futility. He was always advising his disciples to avoid labours which left nothing behind them: "Fuggi quello studio del quale la risultante opera more insieme coll' operante d'essa." How far this takes us from the dreams of Cardan, who devoted a huge tome, illustrated with 800 engravings, to the relations between the planets and the lines of the human face!

If we accept the ideas of certain scholars and novelists of our own

<sup>1</sup> *Kosmos*, 1847, vol. ii. p. 324.

<sup>2</sup> *Saggio*, p. 7. Such, too, is the opinion of M. Séailles, who, by various arguments, maintains the superiority of Leonardo to Bacon (p. 387—390).





16

*Head of an Old Man.*

(WINDSOR LIBRARY.)



Printed by Draeger, Paris



times, Leonardo was the heir to the great magi of antiquity and the precursor of such modern imitators as Dr. Papus or the Sâr Péladan! So each generation finds the need of ancestors! As Da Vinci was not only the artist whom all admire, but also a savant of the first class, judge whether the point is worth discussion! It will be well, however, to see whether there is any truth in the assertion which has been made,<sup>1</sup> that the manuscripts bear traces of magical researches, and whether there is any foundation, as Symonds<sup>2</sup> and D'Annunzio<sup>3</sup> assert, for calling Leonardo a Magian.

It is to be regretted that neither M. Gilbert-Augustin Thierry, the historian of demonography, nor M. Edouard Schuré, the student of the great masters of the occult arts, nor M. Jules Bois, who knows so much about satanism and magic, have turned their attention to the doings of Leonardo. Familiar as they are with Hermes Trismegistus and Pythagoras, they might unveil many of the secrets of our mysterious and shadowy genius. My knowledge is limited and my exegesis purely rationalist; for this I hope to be forgiven, and must leave the task of clearing up the mystery which shrouds the Italian Faust to those who are better equipped than myself. Not that I wish to speak ill of the sciences we call occult, for again and again they have helped on the positive sciences, and shown that the mind excited by mystery has a strange acuteness, amounting almost to second sight.

From first to last our hero lived in a strange and compromising atmosphere, if ever there was one, but this fact has escaped those who have wished to turn him into a sort of Mahatma. Just as Christ frequented publicans, so did Da Vinci take pleasure in the society of mystics, astrologers, alchemists, and charlatans of every kind.

His baptism in all this he received at Florence from Marsilio Ficino, the favourite philosopher of the Medici, and the great propagandist of the Platonic philosophy. We know that in his little

<sup>1</sup> *Revue Bleue*, August 23, 1890.

<sup>2</sup> *The Renaissance in Italy: The Fine Arts*, p. 323.

<sup>3</sup> "At a feast given by Lodovico il Moro, amid the marvels created by the occult arts of the Magian . . . ." (*Le Vergine delle Rocce*.)

collection of books the future painter of the *Last Supper* and the *Mona Lisa* possessed Ficino's treatise on the *Immortalità d'Anima*, of which a Latin edition had appeared in 1482.<sup>1</sup> But the hour of occultism had not yet sounded at Florence. The reasoning powers of the Florentines were too well developed, and their imaginations too dormant to give much purchase to the supernatural. All the naïveté, faith, and mysticism they possessed was absorbed by the dogmas of their irreproachable religious orthodoxy.

Without attempting at present to push the discussion too far, or to anticipate our conclusions, we may allow that in these early years Leonardo dabbled in mysticism, if not in occultism. He was only one-and-twenty when he adopted the system of writing to which he remained faithful for the rest of his life, that is, the practice of writing from right to left, Oriental fashion. No doubt he wished by this semi-cryptography to put difficulties in the way of any one who should attempt to rob him of the secrets he had so patiently won.<sup>2</sup>

Is it possible that the insatiable spirit of Leonardo, in whom artist and savant competed with such vigour for the mastery, may have carried him, through pure curiosity, to the fountain-head of mysticism, that is, to the East, for the solution of the doubts by which he was haunted? We all know that Dr. Richter contends, supporting his contention with much ingenious argument, that the young Florentine undertook a voyage to Egypt, where he took service under the Sultan of Cairo and even went so far as to become a Mohammedan (see vol. i, p. 82). If we followed the development of this romance—for it is nothing more—we should be led on to admitting that Leonardo was initiated by the last heirs of the high priests of Memphis and of Thebes. But in all this we have but a seductive fiction, and by no means a historical reality. Let us pass on to knock at another door.

In establishing himself at Milan, Leonardo became part of a credulous and superstitious society, if ever there was one. Lodovico

<sup>1</sup> Mediocre Latinist as he was, Leonardo probably contented himself with some manuscript translation into Italian.

<sup>2</sup> Cardan also gives cryptographic receipts (*De Subtilitate*, ed. of 1550, p. 320-321).

Sforza supported an army of astrologers, whom he consulted upon every resolution of any importance. We may easily believe that the new comer became friendly enough with a whole crowd of queer, superstitious, nebulous spirits. The reader has already been introduced to the mysterious Jacopo Andrea, and to the quasi fellow-countryman of Leonardo, Fra Luca Pacioli, professor of mathematics, and a fervent disciple of Pythagoras.

In view of Leonardo's horror of all kinds of publicity, it is easy to believe that he preferred to teach "viva voce," like the esoteric philosophers of antiquity. This, moreover, will explain how, although he never published a line of his manuscripts, a certain number of his discoveries came to the knowledge of Cardan and other savants of the time.

In this connection we should always remember that everything said and done in the long process of scientific evolution has not been consigned to writing. The ancients had little enough of our appetite for paper; they knew nothing of that mania for precision which leads us to bring the notary with his "procès verbal" into everything we do. What countless traditions, not to speak of religions—Druidism, for instance—have come down to us without leaving a trace in written language! M. Berthelot, in his luminous study on the Alchemists, has demonstrated that more than one studio receipt was handed down from mouth to mouth through many generations.

Among Leonardo's drawings we find a series of fantastic, incoherent, extravagant sketches, which seem to refer to the practice of magic. Here we find a witch astride on a skeleton; there, a young man, standing, from whose side issues a woman, as Eve issued from Adam; or a being with two heads, one that of an old man, the other that of a young woman, and four arms. Still better—or worse—is a drawing at Christ Church which shows us two women seated on a sort of millstone, one holding a sword and a mirror in which an old man's head is reflected, the other brandishing a bundle of thongs. Near them a cock, over which one of the women holds a protecting hand, a chicken, and hissing serpents. In the background, an old horned witch looses dogs against the two young women and excites an eagle to attack the cock (p. 56).

Here is food for all kinds of theories! Unfortunately the master has supplied a commentary under his own hand for some of these compositions, apparently so fantastic. By the first two he meant to symbolise Envy, by the third Voluptuousness and Grief! No doubt he aimed at similar far-fetched allegories in the rest.

On his return to Florence, Leonardo surrounded himself with pupils of whom two, at least, devoted themselves to all sorts of mystic speculations. One of these was the eminent sculptor, Rustici, who endowed the Baptistery of his native city with a superb group and finished his days in France, at the court of Henry II. This master wasted his life and fortune on experiments in the freezing of mercury. He had for assistant and accomplice one Raffaello Baglioni. He was also addicted to necromancy, of which he made use to frighten his friends and pupils. With him it was not a simple matter of tricks and legerdemain; through Rustici's passion for alchemy we see an adept in the occult sciences.



SKETCH ILLUSTRATING  
LEONARDO'S SCIENTI-  
FIC WRITINGS.

(Library of the Institut de  
France.)

Rustici, who had the honour to entertain Leonardo da Vinci for six months in his house in the Via dei Martelli, may have had eccentric hobbies, but there is no stain on the respectability and even nobility of his character. It was not so with another of Leonardo's pupils, Zoroastro da Peretola. The very name is a revelation!

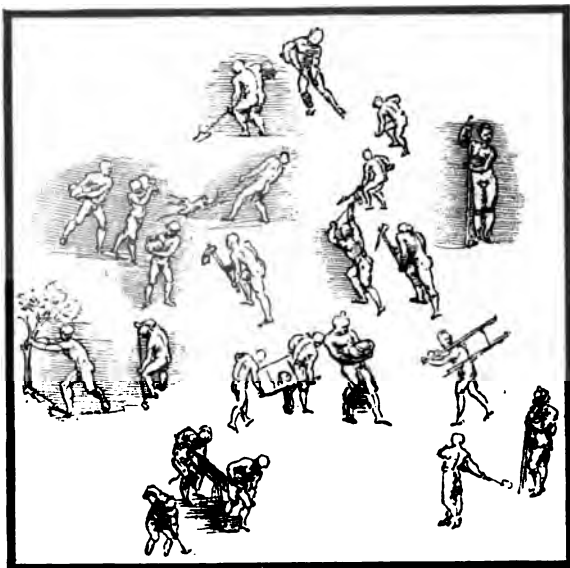
This individual was but fifteen years old when Leonardo, then occupied with the *Battle of Anghiari*, engaged him as a colour-grinder; he only gave way to his taste for occult practices and mystification in general at a later period of his life. Devoted to alchemy, astrology, chiromancy, physiognomy, and a hundred similar pursuits,<sup>1</sup> he had collected a whole arsenal of seals, philacteries,

<sup>1</sup> Epigraphy is a sublime art, but nothing lies like an epitaph! Zoroastro's nephew thus celebrates the rare aptitude of his uncle for penetrating into the secrets of nature: *In eo genere philosophiæ quod ad naturæ obscuritatem spectat, naturæ ipsius beneficio admirabilis.*



amulets, bells, crucibles for the distillation of herbs, earths, metals, stones, woods ; he possessed skins of animals born before their time ("carta non nata"), eyes of lynxes, the saliva of mad dogs, spines of the "pesce colombo," dead men's bones, ropes with which men had been hanged, swords and daggers with which murders had been done, the collar-bone and the knife of Solomon, herbs and seeds collected under different phases of the moon, and under various constellations, and a mass of other "favole e chiacchiere" destined to terrify the intellectually weak.

One of Zoroastro's compatriots, Lasca, has made him the hero of two of his tales. He brings him on to the stage as a man between thirty-six and forty years old, with strongly-marked features, a significant eye, and a long black beard falling in disorder over his chest. In company



SKETCHES OF AGRICULTURAL LABOURS.  
(Windsor Library.)

with three lively companions, the goldsmith Scheggia, the sculptor Pilucca and one Monaco, he takes pleasure in mystifying and even in swindling the more credulous citizens. His exploits—minutely described by Lasca—would in our days bring him under the hand of the law. Blackmailing and fraud generally accounted for half his activity. If Leonardo took pleasure in practical joking, caricaturing, and so on, he always kept his proceedings free from any suspicion of personal interest. With Zoroastro it was just the reverse. His aim was to make money, and he was as expert in raising coin as in raising the dead!

Once again do we find Leonardo in relation with one of those

inquisitive and mystery-loving spirits in which Italy was so rich. After telling us that Giuliano de' Medici, the brother of Leo X., attached the painter to himself, Vasari hastens to add that the prince was an ardent student of philosophy, and especially of alchemy.

Compromising friendships like this afford arguments to d'Annunzio and his co-believers! And, to enhance my final triumph, I will supply yet more weapons to my opponents. The biography of Leonardo abounds, indeed, in things calculated to excite our distrust. No one enjoyed the mystification of his circle more than he. Sometimes he would arrange, in some room adjoining that in which his friends were assembled, the lower section of a sheep's bowel, carefully cleaned and stripped of fat. This, with the help of a forge bellows, he would blow up to such a size that his visitors were driven into a corner, or even out of the house altogether. The moral extracted by Leonardo from such an experiment gives it some right to remembrance, for he compared virtue to one of these transparent bowels, which began by being so small, and then became so vast! On another occasion, during his journey to Rome, he modelled animals in wax, hollow, and so light that when blown into they would float away through the air. After his arrival on the banks of the Tiber and installation by Leo X. in the Vatican, he amused himself by concocting a sort of demon lizard, giving it huge eyes, a beard, horns, and wings, to which an injection of quicksilver gave a trembling movement. This remarkable beast he used to carry about in a box, bringing it out to frighten his friends. He also used to terrify his guests by making the outline of a skeleton appear in the shadowed part of a room. All this, my opponents may say, is very suspicious; but I will put them "hors de combat" with a single question: Is a fondness for mystifications synonymous with a belief in mystic arts?

Appearances, but appearances alone, may be against my client. In any other country but Italy, he would have run the risk of the stake, as sorcerer, magician, or Magian; but such an idea was foreign to the Holy Inquisition.

Leonardo, of course, took precautions to guard against the theft of his discoveries, and so was not over-anxious to communicate the fruits of his own toil. Only a foolish inventor would do otherwise. But take the terms esoteric and hermetic in their common meaning, as characterising the initiation into certain practices which are only handed down through a very small number of pupils, and under the seal of secrecy; it is then clear that the whole practice of the founder of the Milanese Academy was inconsistent with any approval of methods so contrary to the scientific spirit. No doubt, as the Marchese d'Adda has told us, he manipulated crucibles and alembics, distilled perfumes and purified oils, prepared pigments, varnishes and acids, composed mixtures for fire-works or deleterious fumes, but he never failed to set his face against everything esoteric. Thus we find him inveighing against the alchemists: "The new interpreters of nature declare that quicksilver is a seed common to all metals; they forget that Nature varies seed according to the differences in the matters it wishes to produce."

Elsewhere he cries out against chiromancy and necromancy. In denying the value of chiromancy, he has even shown himself more clear-sighted than Aristotle, to say nothing of those modern professors of the science who fill our drawing-rooms. The Greek philosopher, after asking why people with a line stretching from one end to the other of the palm have the best chance of long life, does not hesitate to answer that beings without articulations have little vitality. Now, he adds, it is, above all, those beings whose nature it is to be without articulation, and who are yet articulated, who live the longest.<sup>1</sup> What does Leonardo say? "Talking of predicting the future by the lines on the hand, it is certain that great armies and numerous crews of ships have met death at the same moment, and in the same way, in battle or shipwreck, and yet that no two victims had similar signs on their hands." What argument could be sounder?

Then he attacks the seekers after perpetual motion. "Oh! speculators on perpetual motion, how many vain projects of the like character you have formed! Go and consort with the searchers after gold."

<sup>1</sup> *Problems*, section xxxiv., § 10; cf. section x., § 40.

Or again, "Many have made a trade of delusions and false miracles, deceiving the stupid multitude." Farther on, "Among all human opinions, we must consider as the stupidest the belief in necromancy, the sister of alchemy, which pretends to create simple and natural things." Next he asks whether the spirit is able to speak or not, and answers his own question with arguments worthy of a modern positivist.<sup>1</sup> In short, it is safe to assert that views so deep and broad have never been allied with such powers of minute observation. No savant of his time pronounced himself so categorically as Leonardo against all false doctrine. His "magic" consisted in digging more deeply, and with more independence than any one else had shown, into the mysteries of Nature. His curiosity drew him, no doubt, towards the sciences which were called occult, but the incomparable rectitude of his judgment kept him from being in any way their dupe. He loved to play with fire, but he took good care that his fingers remained intact. What a loss that has been for the mystics and for painters! With his high, deeply furrowed brow, his thick eyebrows, his sarcastic smile, his long untrimmed beard, he would have been a fine figure in a picture, surrounded by a magic circle, wand in hand, raising the dead and deflecting the course of the stars!<sup>2</sup>

"Reality, with its cold definitions, its vague and unexplored horizons, and its narrow limits, could not satisfy," as an eloquent and learned writer recently put it to me,<sup>3</sup> "the ardent spirit of research which made both the greatness and the torment of Leonardo. Dawning science, with its dimly seen wonders, art itself, with its foretaste of immortality, could not fill his restless soul. Nature remained. Like an enchanted forest, concealing dazzling treasures in its depths, nature surrounded him, but continually escaped his grasp. Before he could seize her secrets, he had first to borrow her methods, to imitate her behaviour, to keep off by various devices the profane curiosity of man. Hence the fanciful sides of his conduct, the trouble he took to make his writing indecipherable. His early taste for such things

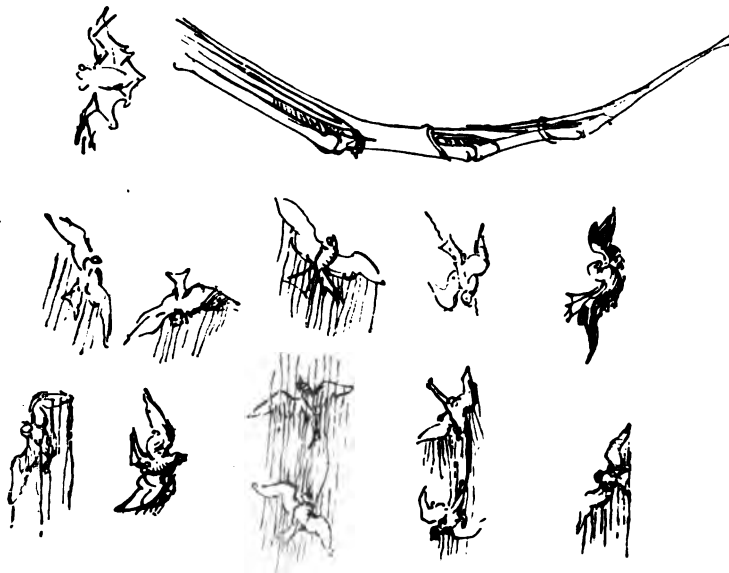
<sup>1</sup> See Richter, vol. ii., p. 301-308.

<sup>2</sup> Has any one ever called attention to the curious likeness between Leonardo and Darwin? Their facial characteristics were almost identical [Ed.]

<sup>3</sup> Madame Raffalovitch.

as the Medusa's head, and the painting or actual imitation of other monsters calculated to frighten those about him, were no more than the relaxations of a superior mind, amusing itself with the childish ideas of the simple and comparatively primitive intelligences about it."

We should measure Leonardo with his contemporaries if we wish to understand how far in advance of his time he was. The illustrious old man had scarcely yielded his last breath in his voluntary exile at Amboise, before the occult sciences were again getting the upper hand all over Europe. Cardan, Paracelsus, Campanella, were "adepts," "magians," "occultists," in the



STUDIES OF THE FLIGHT OF BIRDS.  
(Sabachnikoff Collection.)

sense which we now use those words; they had a right to pose as the heirs of Hermes Trismegistus, of Pythagoras, and of Apollonius; for the same reason they were forerunners of the Saint-Germains and Cagliostros, and of those magians of our own "fin-de-siècle," who have, at least, this one advantage over their predecessors, that they are perfectly honest in their absurdities.

We must confess that at the first glance the labours of Cardan seem more systematic, more synthetic, and better co-ordinated than those of his rival; to the strokes of genius of the latter, he opposes a perfectly organic whole. But how often his laborious erections are unsound in their foundations; how often, in his long chains of

reasoning, does he not turn in a vicious circle! He believes in the influence of the stars, and dwells upon childish comparisons; while, on the other hand, Leonardo never fails to compel our respect by the gravity of his ideas, and the luminous fertility of his generalisations.

Cardan's credulity may be judged from a few instances: he declares, on the authority of Albertus Magnus, that the sapphire cures anthrax by simple contact; he asserts that every precious stone possesses some hidden virtue; that the tooth of the badger or the left foot of the same animal, if attached to the right arm, strengthens the memory. Silver and gold, he asserts, are contained in all the other metals, &c.

In attempting an analysis of those wonderful scientific researches which would have sufficed to immortalise Leonardo, even if he had never painted either the *Last Supper* or the *Mona Lisa*, there are two rocks of which we must be careful to steer clear: on the one hand we must not take every "obiter dictum" too much in earnest, on the other we must not forget the relations, direct or indirect, of the master with his predecessors. A fame like his does not require to be enhanced by the credit which belongs to others.

To give an example: Leonardo says somewhere that he wishes some one would make a glass to magnify the moon, whereupon his biographers claim for him the credit of having invented the telescope!

In his note-books he often mixes up his own observations with those of others. Has not the treatise on the fabled virtues of animals, the text of which has been preserved in his manuscripts, been attributed to him, whereas we know that all he had to do with it was to waste his time in copying out a mass of superstitious nonsense at which he must have been the first to laugh. I do not hesitate to say that in all these matters everything has yet to be done. Without a methodical examination of what his predecessors have left, it is impossible to do justice to Leonardo's share in building up that edifice of modern science which has required the energies of so many generations of workers.

In the domain of mathematics, Leonardo turned his attention successively to geometry, mechanics, and astronomy. The reader will understand that here I must be content with a few illustrations, leaving to specialists the task of setting this part of the master's activity in a full light.

In the field of pure mathematics, Leonardo's writings seem to have less novelty than elsewhere. He is credited, but without any decisive evidence, with the invention of the two symbols + and —. He studied equations, too, as we may judge from one of his memoranda, but we do not know how far he advanced in that direction.

As for geometry, Libri's assertion that he declared the squaring of the circle to be impossible is open to doubt.<sup>1</sup>

Gliding—and for good reason!—over the geometrical and astronomical studies of da Vinci, let me endeavour to do justice to some of the discoveries with which he enriched the mechanical and physical sciences, discoveries, indeed, which were platonic enough, seeing that they remained so long unpublished.

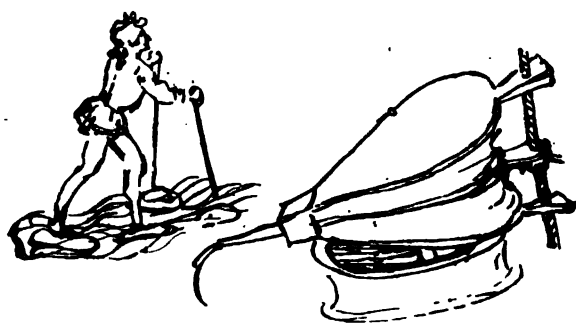
Leonardo called mechanics the Paradise of the Sciences. For no other branch of mathematics did he feel the same passion as for this; no other left so many traces in his writings and among his drawings. Mechanics, in his eyes, embraced and included every manifestation of force and movement, aërial locomotion, motion in water, the action of gunpowder, and that of the innumerable machines over which he lavished his ingenuity, &c. A few quotations will suffice to show the character of his thoughts on this subject. His definition of force is in every way worthy of an antique philosopher or of a modern savant: "Force is a spiritual power without force and impalpable, which manifests itself for a short time in bodies deprived of their natural repose by some accidental violence. I call it spiritual, because the life in it is invisible and without body; impalpable, because the body in which it is produced is increased neither in size nor in weight."

Leonardo anticipated Copernicus in propounding the theory of the

<sup>1</sup> Govi, *Saggio*, p. 13.—Rudio, *Ueber den Antheil der mathematischen Wissenschaften an der Kultur der Renaissance*, Hamburg, 1892, p. 20-23.

earth's movement. This we know from the following passage, first brought to light by Venturi.<sup>1</sup>

"Of a weight descending through the air, the entire revolution of the elements of the movement of circumvolution takes place in twenty-four hours. The moving object descending from the highest part of the fiery sphere, will move straight towards the earth, as all the elements are in a continual motion of circumvolution round the centre of the globe. It can be proved. Let  $b$  be the falling weight, moving from  $a$  in order to descend to  $m$ , the centre of the world; I say that



SKETCH ILLUSTRATING LEONARDO'S SCIENTIFIC RESEARCHES.  
(Codex Atlanticus.)

such a weight, even while it makes a descent curved in the fashion of a helical line, never deviates from its rectilinear descent under which (it) advances continually between the place it left and the centre of the world; because it left point  $a$  and has descended to  $b$ . During

the time it took in descending to  $b$ , it has been carried to  $d$ , the position of  $a$  has been changed to  $c$ , and so the moving body finds itself in the right line which extends between  $c$  and the centre of the world  $m$ . If the moving body descends from  $d$  to  $f$ ,  $c$ , principle of the movement, moves in the same time from  $c$  to  $f$ , [ $e$ ] and if  $f$  descends to  $h$ , it turns itself at  $g$ , and so in twenty-four hours the moving body descends to the earth (at a point) under that from which it started."

On the margin Leonardo has written: "If the moving body descends from the highest part of the elements to the lowest in twenty-four hours, its movement is composed of straight lines and curves. I say straight, because it never deviates from the very short line which extends between the place from which it started in the centre of the elements, and it will stop at the lowest extremity of such a straight line,

<sup>1</sup> *Essai*, p. 7—8.



which will always be found, with respect to the zenith, under the point from which the moving body separated itself. And this movement is curved in itself with all parts of the line. Hence it is that a stone cast from a tower does not strike against the side of the tower before it reaches the ground."<sup>1</sup>

Elsewhere, Leonardo declares in so many words that the sun does not move: "Il solè non si move."<sup>2</sup>

Mechanics owe a crowd of other discoveries and inventions to Leonardo. He introduced the study of friction, the effects of which he had calculated with the help of a series of experiments; he invented a dynamometer for determining the power of machines and the traction power of animals, by combining their weight with their muscular strength, etc. It is also said that he was the first in modern times to turn his attention to the centres of gravity of solid bodies, though he had but imperfectly solved the problem of the fall of weights.<sup>3</sup>

We shall look in vain for the name of Leonardo in the works of writers who have related the genesis of the steam-engine. He has been given no place with the forerunners of Watt, Denis Papin,<sup>4</sup> and Solomon de Caus. And yet his right to be there is indisputable. One of his manuscripts in the Library of the Institut de France gives a minute description of a copper machine "which throws iron balls with great fuss and fury. The third part of the instrument consists of a large charcoal fire; when it is well heated by this, tighten the screw *D*, which is above a vessel of water *a, b, c*, and on tightening this upper screw it (the water) will come out below. Having fallen into the heated part of the machine, the water will transform itself into smoke with



SKETCH ILLUSTRATING  
LEONARDO'S SCIENTIFIC  
RESEARCHES.

(Codex Atlanticus.)

<sup>1</sup> Ravaisson-Mollien, MS. G, fol. 55.

<sup>2</sup> Richter, vol. ii., p. 152.

<sup>3</sup> Libri, *Histoire des Sciences Mathématiques*, vol. iii. p. 41-45.

<sup>4</sup> On Papin, see M. Berthelot's study in the *Revue des Deux Mondes* for October 1, 1895.

noise and fury. This (machine) drove a ball weighing one talent over a distance of six stadia." <sup>1</sup>

The museum at Valenciennes possesses a drawing by Leonardo which represents a spit turned by steam, or, to be more exact, by the air rarefied by the heat of the fire. <sup>2</sup>

As a practical mechanic Leonardo was gifted with extraordinary powers. He played with marvellous facility and adaptability with such matters as beams, supports, cranes, escapements, etc., etc. At a time when the use of iron was still very restricted, he was lavish with his cogwheels, his pulleys, in fact with all those refinements which, in our century, have led to the substitution of machine labour for that of men.

Among instruments invented by his untiring brain we hear of a very ingenious pedometer, of several machines for laminating iron, for making cylinders, files, saws, and screws, for shaving cloth, for winding, for planing, a mechanical press, a gold beater's hammer, a machine for digging ditches, and one for tilling the soil with the help of the wind, more than one sounding apparatus, paddle-wheels for boats, lamps with double currents of air, etc.

Aërial navigation gave him many a sleepless night. He contrived wings, flying cars, winged chairs, etc. One of his papers, running to about twenty pages, is devoted to the flight of birds. <sup>3</sup>

Gilberto Govi has shown that Leonardo was the first inventor of screw propulsion, from which modern navigation derives such enormous advantages. As early as the end of the fifteenth century Leonardo applied it, of course on a very small scale. One of the Institut manuscripts (B., fol. 83 verso) contains a drawing of a large screw meant to turn round a vertical axis. Not only, says Govi, did Leonardo invent the screw, he even thought of applying it to aërial locomotion. He constructed small paper models, set them in motion by means of thin bands of steel twisted into spirals, and then

<sup>1</sup> Charles Ravaisson-Mollien, vol. ii., fol. 33. Cf. Séailles, p. 346-7.

<sup>2</sup> Séailles, p. 347-8.

<sup>3</sup> Sabachnikoff, Piumati and Ravaisson-Mollien, *Codice sul Volo degli Uccelli*. Paris, Rouveyre, 1873. Cf. De Geymüller: *Gazette des Beaux Arts*, 1894.

left them to themselves. He made a study, moreover, of the power which might be derived from the air by beating it with thin boards of a certain size, and he invented the parachute, which he thus describes : " If a man has a pavilion (a tent) of starched linen, of which each face measures twelve cubits square, he may throw himself from any height whatever without fear of danger."<sup>1</sup>

If we brought together all the separate fragments Leonardo wrote on these subjects, fragments to be numbered in thousands, we should have a vast treatise on physics ; for he touched on gravity, on equilibrium, on compressibility, on elasticity, on the action of heat, on fusion, on dilatation, on the radiation of heat, on optics and acoustics, on magnetism, lavishing on each the most striking definitions and the most luminous generalisations. He anticipated Pascal in noting that any liquid in communicating vessels, however different in form those vessels might be, remained at the same level in each (*Codex Atlanticus*, fol. 314). This was the principle of the hydraulic press invented in 1653. He forestalled Chevreul, in laying down with perfect clearness the laws governing complementary colours, showing, for instance, that red gained in intensity when placed in juxtaposition with green.

As for heat, how clearly he defines its effect upon liquids when they hold foreign bodies in suspension ! " If," he says, " you heat muddy water it promptly becomes quite clear. This is because as the water becomes hotter it increases (in volume), and, in increasing, it becomes rarefied, and when rarefied it can no longer support the heavy materials it contains." Turning to the radiation of heat, he notes that the rays reflected from the surface of a glass ball filled with cold water are warmer than the fire from which they originate, and that it is the same with those reflected from a concave mirror.

His researches into the nature, weight, and movement of water inspired Leonardo with one of his most curious treatises. He studied the laws governing liquids in repose, as well as those which govern gases. We may say that he laid the foundation for those laws of the movements and equilibrium of fluids which were afterwards completed

<sup>1</sup> *Compte-rendus de l'Académie des Sciences*, August 29, 1881.

by S. Stevin, Galileo, Torricelli, Pascal, Boyle, Mariotti, Bernouilli, d'Alembert, and others.<sup>1</sup>

The resistance, the condensation, and the weight of air were studied by Leonardo, who was thereby enabled to explain the suspension of bodies in the atmosphere, and the formation of clouds.<sup>2</sup>

In the *Codex Atlanticus* (fol. 245) Leonardo describes an instrument for showing the constitution and density of the air, and for warning us of the approach of rain. A drawing of this contrivance has been preserved. It consists of a graduated dial, in the centre of which is fixed a movable needle with a ball at each extremity, one ball being covered with cotton, the other with wax.<sup>3</sup>

Leonardo was the first to note that the sun's light is more brilliant on the tops of mountains than at their bases. He attributes the difference to the fact that the layer of air between the summit of a mountain and the sun is not so thick as that between the sun and its base. This observation—with which Deluc has been wrongly credited—has been confirmed by Saussure and Humboldt.<sup>4</sup>

He had a glimpse of the telescope when he wrote, "Fa ochiali da vedere la luna grande." But, as I have said on a previous page, to assert and to prove are different things, and it is a long way from a simple wish to realisation.

Libri credits Leonardo with the discovery of diffraction; but the passage on which he founds his assertion really has to do with the phenomena of the penumbra, and of the confused images to which it gives rise.<sup>5</sup>

Experiments concerned with the properties of mirrors complete this branch of his researches. These experiments were chiefly carried on during his stay at Rome.

Optics excited his interest more than any other branch of physics; he revived and enriched it in every direction. The study he devoted to the "camera obscura" shows how long it takes poor humanity, I

<sup>1</sup> Govi, *Saggio*, p. 18.

<sup>2</sup> Libri, vol. iii., p. 42-43.

<sup>3</sup> See Venturi, *Essai*, p. 28; Grote, *Leonardo da Vinci als Ingenieur und Philosoph*.

<sup>4</sup> Uzielli, *Leonardo da Vinci e le Alpi*, p. 17.

<sup>5</sup> Figuier, *Savants du Moyen Age*, p. 199-204.

need not say to understand, but even to accept the notion of, the commonest and most elementary phenomena. Aristotle had already noticed that if a square hole were cut in a window shutter, the beam of light thrown through it by the sun nevertheless described a circle on the wall; absorbed by the anomaly, he omits to push his investigations into its cause.<sup>1</sup> Eighteen centuries were to pass before anything more was to be known. Leonardo says that if you place yourself in a hermetically closed room, facing a building, landscape, or any other object directly lighted by the sun, and then cut a small circular hole in the shutter, images of the objects outside will be thrown on any surface facing the hole and will be reversed. The principle of the "camera obscura" was found. Perhaps one Don Papnuzio may have had something to do with the discovery; but of the latter we find no mention until after 1521, when Leonardo was already dead. On the other hand we know for certain that Da Vinci's discovery was at least half a century in advance of that of Cardan, and seventy-five years before that of G. B. Porta, to whom the credit has hitherto been given. Cardan's *De Subtilitate* did not appear until 1550, nor Porta's treatise on natural magic until 1589. Leonardo's contrivance was not, of course, complete, for it omitted the use of the glass lens, by which the size and definition of the image could be increased. This was to be Cardan's contribution to the invention. Thus we see that even a sovereign intellect cannot dispense with the help of time, which, in carrying an idea to complete fruition, often makes use of the most humble students.

The theory of complementary colours, so indissolubly connected with the name of Chevreul,<sup>2</sup> is to be found, in germ, in the *Trattato della Pittura* (cap. 190): "If you wish that the neighbourhood of one colour should lend charm to the colour near it, observe what happens when the sun's rays form the rainbow, or iris; the colours are begotten by the movement of the rain, for each drop changes, in falling, into each of the colours of this rainbow, as will be proved in its proper place." A

<sup>1</sup> *Problems*, § 6.

<sup>2</sup> Chevreul, *De la Loi du Contraste simultané des Couleurs*. Paris, 1839. The same: *Exposé d'un Moyen de définir et de nommer les Couleurs d'après une Méthode précise et expérimentale*. (*Mémoires de l'Académie des Sciences*, vol. xxxiii. Paris, 1861.)

few lines farther on Leonardo advises the juxtaposition of green and red.<sup>1</sup>

I may compare this theory with that of Chevreul, as epitomised by Charles Blanc : " If we combine two primary colours, yellow and blue, for instance, in order to make a secondary colour, green, this secondary colour will reach its maximum of intensity when we bring it into the immediate neighbourhood of its complementary, which is red. So, too, if we combine yellow and red to form orange, this secondary colour will be enhanced by the juxtaposition of blue. Finally, if we combine red and blue to form violet, this secondary tint will have its brilliancy increased when set against yellow." <sup>2</sup>

All this is most significant. Without depriving Chevreul of any part of his credit, for he was certainly ignorant of Leonardo's teachings, our quotations secure priority for the Florentine in a capital discovery in the science of colours.

A few more isolated remarks may be noted. " Black clothes make the complexion look whiter than it is, white clothes make it look darker ; yellow clothes heighten people's colour, red clothes make them seem pale " (cap. 238).

Leonardo enumerates six colours (against three admitted by the ancients, and seven by Newton), namely, blue, yellow, green ; the colour of a lion, tan or ochre ; red, and the colour of mulberries. <sup>3</sup>

<sup>1</sup> L. B. Alberti had already caught a glimpse of this law, but his ideas were still very indefinite. " The colour red," he says, " set between sky-blue and green, communicates a mutual nobleness to them. The colour white set between an ashy grey and yellow, enriches them with a certain gaiety, as it does, indeed, most colours. Dark colours receive a notable accession of dignity when placed among light ones, and light colours produce the best effects when placed among dark ones." Cardan advises that in a picture dark colours should be alternated with light ones ; that red should be placed between blue ("cæruleus") and green, white between grey ("cinereus") and yellow. (*De Subtilitate*, ed. of 1550, p. 130.)

<sup>2</sup> *Grammaire des Arts du Dessin*, p. 597-598.

<sup>3</sup> To appreciate the independence of Leonardo in his studies of colours, it will be enough to compare his conclusions with those of the Neapolitan, S. Portio, who published at Florence, in 1548, a *De Coloribus Libellus*, full of antiquated Aristotelian ideas. Leonardo's notes on the subject have been analysed and properly appreciated by E. Brücke in *Sitzungs-Berichte der Wiener Akademie der Wissenschaften* (1852), in his *Physiologie der Farben* (Leipsic, 1866), and in his *Bruchstücke aus der Theorie der bild. Künste* (Leipzig, 1877).

"As for black and white," he says, "they are not colours, for one corresponds to the absence of colour, and the other is the genesis of colour (cap. 213 ; cf. cap. 247)." <sup>1</sup> Elsewhere (cap. 254) he counts among the simple colours white, black, (including these two, as he explains, simply out of regard for the special needs of painters), yellow, green, and red. "White," he says, "corresponds to light, yellow to earth, green to water, blue to air, red to fire, and black to shadows."

The study of acoustics gave Leonardo materials for curious experiments in echoes, in vibratory movements, etc. He notes that a blow struck on one bell produces a sympathetic effect on another bell of the same kind ; "that when the string of a lute is struck it corresponds with and conveys a movement to a similar string of the same tone on another lute, as one may convince one's self by placing a straw on the string similar to the one struck. Who would believe, asks Govi, that these notes and observations anticipated those of Galileo, Mersenne, and others, which, however, they did by more than a century ?" <sup>2</sup>

A method suggested by Leonardo for perceiving distant sounds has a certain analogy with suggestions made in our own time for the same purpose, before the invention of the electric telephone. Here is the passage in which it is set out :—"If you bring your ship to, and put one end of a tube ("sarbacane") in the water and the other end to your ear, you will hear ships which are quite a long way off ; and if you do the same thing on land, you will hear what is going on far away from where you are." <sup>3</sup>

He has left but few notes on the conduct of the loadstone, but those notes show a wonderful grasp of his subject ; he established the fact that, given an equality of weight, the loadstone and iron attract in the same proportion. <sup>4</sup>

<sup>1</sup> L. B. Alberti had already excluded black and white from the catalogue of colours (Mancini, p. 138).

<sup>2</sup> *Saggio*, p. 16.

<sup>3</sup> Charles Ravaisson-Mollien, *Comptes-rendus de l'Académie des Sciences*, 1881, vol. ii., p. 497.

<sup>4</sup> *Saggio*, p. 15.

To chemistry he felt no more than a passing attraction; it interested him chiefly by its connection with the preparation of pigments.<sup>1</sup>

He had, nevertheless, a good idea of the conditions of combustion. "Fire," he says, "continually destroys the air by which it is nourished. It would create a vacuum if more air did not rush in to fill the space. When air is not in a proper condition to receive flame, neither flame nor any animal, terrestrial or aërial, can live in it. No animal can live where a flame cannot live."<sup>2</sup>

Does not this give a complete definition of the part played by oxygen, and that two centuries and a half before Lavoisier made his immortal discoveries? Nothing is wanting but the name of the gas and the idea of employing scales to weigh the products of calcination, before and after. (M. Berthelot, however, reminds me that similar ideas are to be found in the works of Aristotle and Cicero.)

That Leonardo shared in many of the delusions of his time has been proved lately by examination of his treatise on animals, the manuscript of which is preserved in the Institut de France. This treatise contains a long dissertation on the mysterious virtues of all kinds of quadrupeds, birds, reptiles, and fishes. A leading historian of art, Anton Springer,<sup>3</sup> has demonstrated that the treatise in question is nothing more than an extract from a famous work of the middle ages, the *Physiologus* or *Bestiarius*. We are therein told, for instance, that if the bird known as the "callendrino" is placed before a sick person, it will turn away its head if the latter is going to die; if, on the other hand, he is going to get better, the bird will look him straight in the face, and will take the disease upon himself. When the *Bestiarii* failed Leonardo in his study of animal habits, he had recourse to Brunetto Latini's *Tesoro*. Here again Springer has removed all doubt as to the borrowings of the fifteenth century Florentine from his fellow-countryman of the thirteenth. Even Pliny—the credulous Roman naturalist

<sup>1</sup> Richter, vol. i., pp. 320, *et seq.*

<sup>2</sup> *Codex Atlanticus*, fols. 234, 236.

<sup>3</sup> *Berichte der k. Sächs. Gesellschaft der Wissenschaften*, 1884, p. 244-271.



—was drawn upon. How an intellect so independent as Leonardo's could take the trouble to analyse—I will not say to receive—so many absurd beliefs, in which the basilisk, the phoenix, and the sirens are accepted as real beings, it is difficult to explain. His only excuse is to be found in the example set by the most eminent men among his contemporaries.

He did not always confine himself to mere compilation. Many a



DELLA TORRE TEACHING IN THE UNIVERSITY OF PAVIA. BRONZE BAS RELIEF BY RICCIO.  
(The Louvre.)

comparison or maxim reveals a personal note. Thus he says of the lion: "We may compare him to the children (or disciples) of virtue, who awake at the call of glory and raise themselves by honourable studies, thanks to which they continually mount higher and higher. As for those who are deaf to this appeal, they stand apart and separate from virtuous men."

In the domain of natural science, Leonardo was a student of anatomy, botany, and geology.

Anticipating the boldest speculations of the nineteenth century, he declares that motion is the cause of all life: "Il moto è causa d'ogni vita."<sup>1</sup> We might almost fancy we were sitting at the feet of Haeckel, and hearing him say that "the life of any organism is nothing more than a continuous chain of movements in matter, and that vital motion is homogeneous, persistent, dominant."<sup>2</sup>

Leonardo was the first to propose the division of animals into two great classes: those which have their skeletons inside them, and those which have it outside (cockles, oysters, etc.),<sup>3</sup> a division which would correspond roughly with the two classes of vertebrates and invertebrates as fixed by Lamarck, and generally adopted until superseded by the evolutionary theories of our own time.

Leonardo's studies of anatomy were not—as M. Mathias Duval reminds us—confined to such as will satisfy the artist who wishes merely to comprehend external forms.<sup>4</sup> He was thorough in his researches, and determined to penetrate to the inmost secrets of the mechanism of motion and of the functions of the separate organs.

This section of his writings is so well known that we need not describe it again. We may turn, rather, to his studies in biology. Here, again, he shows a marvellous fertility, interesting himself at once in reflex action, in the flight of birds, in animal mechanism, in embryology. Thus—to take one example out of a hundred—he succeeds in unravelling, with curious precision, those complicated movements which have become familiar to us through instantaneous photography. To become convinced of this we have only to read section 401 of the *Trattato della Pittura*. M. Mathias Duval—whom I must again ask leave to quote—shows that in his researches into the functions of the nervous system, the fifteenth century

<sup>1</sup> Richter, vol. ii. p. 286.

<sup>2</sup> *Natürliche Schöpfungsgeschichte*.

<sup>3</sup> Aristotle had divided them into animals with and animals without blood.

<sup>4</sup> Leonardo's library included a treatise on anatomy, perhaps that of Alessandro Benedetto, printed at Pavia in 1478, reprinted at Bologna in 1482, at Padua in 1484, at Leipzig in 1493, at Venice in 1494 and 1499; he may also have possessed the *Fasciculus Medicinæ* of Ketham, published at Venice in 1491. (D'Adda, *La Biblioteca de Leonardo da Vinci*, p. 44.)

savant clearly distinguished the movements which are independent of the brain, and are due to the immediate intervention of the spinal marrow.<sup>1</sup> Leonardo goes so far as to say that reflex actions take place even when the will is tending to check them.

To properly appreciate Leonardo's activity in all the directions in which it was exercised, would require a genius as great as his own. The reader will therefore understand that I have had to select a certain number of examples, and that prudence compels me to fortify my judgments with those of the various specialists who have studied the different results of his researches. I shall borrow, then, from M. Mathias Duval the following classification of the master's anatomical studies. He divides them into three categories: i. Notes relating to various observation made on corpses, especially on subjects reduced to the last degree of emaciation. ii. Notes on the plan of the anatomical treatise which he proposed to publish. In one place he says he will begin with the skin, pointing out the variations of colour which it may undergo; in another he proposes to follow a more didactic sequence, first describing the skeleton, and then dressing it in its muscles, blood-vessels, etc.; again, he enumerates the preparations and dissections he intends to make in order to study and explain the bones and cartilages, the muscles and tendons, the blood-vessels and the nerves, and shows how it will be necessary to exhibit each limb in at least three views to give a proper idea of it. In yet another place he gives a new plan for his treatise, in which he would begin with the embryo, with its formation, its increase, its development after birth, and go on to the final constitution of the adult man and woman. iii. Notes in which he explains the necessity for reproducing with his pencil the results of his dissections, in order to bring them to the knowledge of those who might have neither courage nor opportunity for direct study from the dead subject. Here he describes in uncompromising but singularly expressive terms, the conditions under which a

<sup>1</sup> "How it is that the nerves sometimes act of their own accord, without receiving orders from the will; this is clearly seen in paralytics, and in persons who are benumbed, with whom the limbs move without the intervention of the will, and even against its commands; so, too, with epileptics, and even with parts of bodies, as in tails of lizards, after being cut off." (Mathias Duval, *L'Anatomie des Maîtres*.)

student of anatomy had then to work, sharing his home with "corpses flayed, stripped of flesh, and terrible to look at."<sup>1</sup>

Leonardo divined the circulation of the blood, but he failed to explain its mechanism. "The heart," he says, "is a muscle of great strength, much stronger than the other muscles . . . . The blood which returns when the heart opens again is not the same as that which closes the valves."<sup>2</sup>

The relations of Leonardo with Marc Antonio della Torre, a famous professor at the University of Pavia, were particularly interesting. This young savant, whose native place was Verona, a city dear to students of the classics, and whose father was a doctor and

professor of Padua, was one of the first to throw off the Arab yoke, and to study nature for himself, under the auspices of the Greeks, notably of Galen. Scarcely had he reached manhood (he was born in 1481), before he won fame by his anatomical studies. His lectures had a great vogue, first at Padua, where he taught until 1506, and then at Pavia. His stay in the last-named city lasted from 1506 to 1512, when he died at the early age of thirty. His



ANATOMICAL STUDY.  
(Windsor Library.)

acquaintance with Leonardo took place during the artist's second stay at Milan. One of the estates of the Melzi, at Vaverole (Vapri?), must have been the ground on which the two friends met. Vasari tells us that "Della Torre made great use, in his works, of the genius, the knowledge, and the hand of Leonardo, who, for his part, made a book in which figures were drawn with red chalk and shaded with the

<sup>1</sup> Mathias Duval and Albert Bical, *L'Anatomie des Maîtres*, p. 13-14. (Paris, 1890-91).

<sup>2</sup> Ravaisson-Mollien, *Les Manuscrits*, M.G., fol. 1 verso.—Richter, vol. ii. p. 132.—Séailles, p. 297-302.

pen. After studies of osteology came those of the nerves and muscles divided into three sections: the first for the innermost layer, the second for the layer in the middle, and the last for the superficial muscles. Each figure is accompanied by explanatory notes written in fantastic characters, traced in the reverse direction and with the left hand, so that the eye unaccustomed to them cannot decipher them without the help of a mirror."

I must not forget to say that, contrary to the usually received opinion, Leonardo was the master, and not the pupil of Della Torre in this class of studies.<sup>1</sup> One of his compilations, the "Libro titolato de Figura umana," was begun, according to its author's own statement, April 2nd,



MEASUREMENTS OF THE HUMAN HEAD.

(Windsor Library.)

<sup>1</sup> It is rather surprising to find this remarkable idea once more put forward in M. Mathias Duval's recent dissertation upon Leonardo: "Leonardo da Vinci was the pupil and fellow-worker of Della Torre" (*Dall' Anatomia*, folio A, 1898, p. 27). As early as 1891, I demonstrated the absurdity of such a belief in the *Revue des Deux Mondes*.—See also De Toni, *Frammenti Vinciani*, vol. i. p. 6.—Strzygowski, *Jahrbuch*, 1895, p. 167.—No work of Della Torre seems to have been printed.—Vasari says that Caroto painted a portrait by Della Torre (ed. Milanese, vol. v. p. 289). The Louvre possesses the bronze bas-reliefs, modelled and cast by Andrea Riccio for the tomb of Della Torre in the Church of San Fermo Maggiore at Verona. These reliefs deal with the teaching of Della Torre, etc. As for the portrait in the Ambrosiana, which passes for a work of Leonardo's and is said to represent his friend, it was a very feeble performance at its best and has been entirely repainted. (Rigollot, *Catalogue de l'Œuvre de Leonardo da Vinci*, p. 78-79.)

1489, that is to say, when Torre was only seven years old. Leonardo seems to have continued his researches after his return to Florence. When he received the visit of the Cardinal d'Aragon in 1516, Leonardo boasted of having made dissections ("haver facta natomia") on more than a hundred subjects of all ages, some male and some female. The *Anonimo* (edited by Milanese) adds that his studies were carried on in the hospital of Santa Maria Novella, at Florence.<sup>1</sup>

We have been told by an expert that Leonardo's anatomical studies were, unlike those of Michelangelo, directed less towards the study of the muscles, than to the observation of the effects produced upon our organs by the mind and the passions. In reproducing one of his anatomical drawings, M. Mathias Duval points out the almost over-scrupulous care with which the master sets out to distinguish, by dissection, the different groups of the pectoral, the deltoid, and the sterno-mastoid muscles. We must remember, he adds, that Leonardo consecrates numerous chapters in the *Trattato della Pittura* to the description of the muscles of the body, of the joints of the limbs, of "the sinews and tendons which gather themselves up when such and such a muscle swells in order to produce such and such an action."<sup>2</sup>

In what he says about growth, we may note the interesting remark that at the age of three years people have reached one half of what is to be their final height.<sup>3</sup> According to my learned colleague, M. Edmond Perrier, this rule is fairly exact.

In the excess of his scientific probity, Leonardo nursed certain prejudices against the practice of medicine. Like some distinguished men of later times, he would have readily declared it to be rather an art than a science. His uncertain humour in this direction breaks out more than once. At one time we find him comparing doctors to alchemists; at another he declares that any one who takes medicines takes evil

<sup>1</sup> We know that in 1506 the doctors of Florence obtained the corpse of a man who had been executed "per fare una notomia" (Landucci, *Diario fiorentino*, p. 273).

<sup>2</sup> *Précis d'Anatomie artistique*, p. 15.

<sup>3</sup> Richter, vol. i. p. 169.

advice. His rule of health is thus expressed: "Do not eat without appetite; restrict yourself to well cooked and simply prepared food, and masticate thoroughly." Once, however, he confesses that "if illness is a want of harmony between the elements infused into the living body, medicine is the re-establishing of good relations between those elements."<sup>1</sup>

In his multitudinous researches Leonardo touches for a moment on ethnography. He asks himself why the inhabitants of hot countries are black, and he arrives at this somewhat fantastic explanation: Men born in hot countries love the night because it refreshes them, and hold the light in horror because it burns them; this is why they have the colour of night, which is black. In cold countries we have a contrary result!<sup>2</sup>

Botany owes a few of its cardinal laws to Leonardo.

The combined studies of Messrs. Uzielli and Ravaisson-Mollien<sup>3</sup> have proved that Leonardo was familiar with the writings of Theophrastus, some of whose experiments he mentions and even renews. Although he does not seem to have recognised the existence of sex in plants, he has at least enriched the science of botany with a large number of valuable observations. The system on which leaves are disposed and arranged about their stalks was the object of much patient study, as we see more particularly in the fourth book of the *Trattato*. He was the first to lay down the laws which govern this branch of science, and deserves the credit so long accorded to the Englishman, Brown, whose work did not appear until 1658.

Leonardo points out that the part of a tree's circumference which faces south shows more vigour and youth than the part which faces north. The rings in a section through the trunk or branches show the number of years they have existed, and the width of those rings corresponds to the humidity or dryness of the various years. They show, too, the orientation of the tree, for they are wider and thicker

<sup>1</sup> Richter, vol. ii. p. 133.

<sup>2</sup> Richter, vol. ii. p. 270.

<sup>3</sup> *Conjectures à propos d'un Buste en Marbre de Béatrix d'Este*. (*Gazette des Beaux Arts*, 1877, and *Ricerche*, vol. ii. p. 1-25.)

on the north side than on the south, so that the core of the trunk is nearer to the bark on the south side than on the north.<sup>1</sup>

In another passage Leonardo explains the growth of bark as follows: The increase in girth of plants is caused by the sap which develops in the month of April between the wood of the tree and



ANATOMICAL STUDIES.  
(Windsor Library.)

its liber. The liber then changes into bark, and fresh fissures are formed in the bark, at the bottom of the fissures already existing.

Among his other botanical researches we may refer to his studies of the action of poison upon plants.<sup>2</sup>

He thus describes the nutrition of plants: "The sun gives the spirit of life to plants, while the earth nourishes them with its moisture. With regard to this, I have already tried the experiment of leaving only a very small root to a pumpkin; it brought to per-

<sup>1</sup> Montaigne found an artisan at Pisa (1580-81) who had noticed that the rings were narrower on the north side of a tree than on the south. (*Voyage*, Ancona edition, p. 484-485.)

<sup>2</sup> Libri, *Histoire des Sciences Mathématiques*, vol. iii. p. 225.



fection all the fruit the plant could produce, which amounted to sixty pumpkins of the long kind. I patiently devoted my mind to consider this result, and I saw that the moisture of the night dews, penetrating abundantly into the points of attachment of the large leaves, nourished the plant with its children, or rather the eggs which had to produce the children. Every branch, every fruit pod, is born at the springing of the leaves, which acts as mother to it, conveying to it the rain water and the dew." <sup>2</sup>

It is in geology, however, that Leonardo claims the largest tribute of admiration by the originality of his views and the boldness of his conjectures. No one before him had penetrated so deeply into the mysterious cataclysms of our globe. His hypotheses, veritable strokes of genius as they are, are directly related to those of Lyell and



STUDIES OF FLOWERS AND LEAVES  
(Windsor Library.)

Darwin. He does not even condescend to discuss the Biblical tradition as to the date of the creation; his estimates proceed by hundreds and thousands of centuries.<sup>2</sup> Neither is he embarrassed by the most appalling ideas of distance. After assigning to the accumulations formed by the Po a duration of two hundred thousand years, he prophesies that all the rivers which now fall into the Mediterranean will end by being tributaries of the Nile,

<sup>1</sup> Ravaisson-Mollien, MS. G, fols. 32, 33.

<sup>2</sup> Uzielli, *Leonardo da Vinci e le Alpi*, p. 68-74.

and that the latter will have its mouth at the Straits of Gibraltar, just as the rivers which once fell into the gulf of the Po are now affluents of the Po itself.

Long before Bernard Palissy,<sup>1</sup> who has hitherto been called the leader in all these studies, the learned Italian had fixed his attention upon the shells found upon the tops of mountains. He shows that their presence at such a situation had nothing to do with any universal deluge, and he sets out the bases of his belief with a logical incisiveness which is rare enough.<sup>2</sup> These, in substance, are his arguments: these shells were not deposited by the Deluge, as is proved by the fact that they are all found at one level, while the summits of many mountains rise above that level; otherwise, they ought to appear at the summits of these mountains, and not at a short distance from their bases. To suppose that these molluscs, accustomed to live at the edge of the sea, had come to these places during the Flood, we should have to believe that these very slowly moving animals had made their way from the borders of the Adriatic to Montferrat in Lombardy, a distance of 250 miles (thousands of cubits), during the forty days of rain which produced the Deluge. To those who assert that they were carried by the waves, Leonardo answers that shell-fish, having regard to their weight, could only travel at the bottom of the sea. "If you will not allow this," adds

<sup>1</sup> "A potter, who knew neither Latin nor Greek, was the first who dared to assert, towards the end of the sixteenth century and before all Paris and its learned men, that fossil shells were real shells deposited in remote periods of the world in the places where they were then being found; and that animals, and especially fishes, had given to figured stones and rocks all their different markings. This was Bernard Palissy, a native of Saintonge, and one of those great physicists whom nature alone can produce. His ideas, however, have slept for nearly a hundred years, and the name of their author is almost forgotten." (Fontenelle, *Histoire de l'Académie*, 1720.)—In Bouillet's *Dictionnaire universel des Sciences, des Lettres, et des Arts* (edition of 1874, p. 759), we find it asserted that Bernard Palissy was the first to put forward a really true and just theory of geology! And thus is history written even in the second half of the nineteenth century! A comparison of Leonardo's text with that of Palissy proves to demonstration where the credit for priority in the discovery should be assigned.

<sup>2</sup> Speaking of the petrified shells found on mountains, Palissy denies that they "were spread over the earth in the days of the Deluge. Wherefore I maintain," he says farther on, "that the fishes, found petrified in various quarries, were begotten in those places, while the rocks were nothing but water and mud, which were afterwards turned into rock with the said fishes, as you will understand presently when I come to speak of the rocks of the Ardennes." (*Œuvres complètes*, ed. Gap., p. 273-275.)

the implacable logician, "confess at least that they must have been left on the tops of the highest mountains, or in lakes at their bases, such as those of Como, Fiesole, Perugia, and the Lago Maggiore."

It is possible that Leonardo was first started on his geological researches by a passage in Boccaccio, in the story of *Filocolo*. Struck with the quantity of fossil shells in certain regions, the illustrious story-teller does not hesitate to look upon their presence as a sign that the ocean had once covered the continent.<sup>1</sup> Another floating idea which Leonardo had the wit to appropriate!

Leonardo anticipated Cuvier in showing that the level of the sea's bottom is continually rising, sometimes suddenly and rapidly, sometimes by slow accumulations of all kinds of "débris." Mountains, according to him, are both made and destroyed by rivers. Their summits may have been the beds of rivers or of seas; but these, driven to retire by the slow corrosion of the mountain bases, have had to form other beds. Here is his profession of faith: "That the northern bases of some Alps are not yet petrified: and this is plainly to be seen where the rivers, which cut through them, flow to the north; where they cut through the strata in the living stone in the higher parts of the mountains, and where they join the plains, these strata are all of potter's clay, as is to be seen in the valley of Lamona, where the river Lamona, as it issues from the Apennines, demonstrates these things on its banks.—That the rivers have all cut and divided the mountains of the great Alps one from the other: this is visible in the order of the stratified rocks, because from the summits of the banks, down to the river, the correspondence of the strata in the rocks is visible on either side of the river.—That the stratified stones of the

<sup>1</sup> See D'Archiac, *Géologie et Paléontologie*, p. 22, Paris, 1866. A contemporary of Leonardo, Alessandro degli Alessandri (1460-1523), thought he saw in the presence of petrified shells on the mountains of Calabria, a proof that the sea had once covered their summits, either by rising from its bed or through a change in the axis of the earth's rotation. Finally, Frascator set himself to show that the fossil shells found, about 1517, in the foundations of the citadel at Verona, could not have been left by Noah's Deluge, and that it was absurd to ascribe them to the plastic forces of nature or to Aristotle's equivocal generation; in short, that the animals to which they belonged had lived on the spot, in water which had since betaken itself elsewhere.

mountains are all layers of clay, deposited one above the other by the various floods of the rivers.—That the different size of the strata is caused by the difference in the floods : that is to say, greater or lesser floods.”<sup>1</sup>

Alluding elsewhere to a contemporary landslide (that, according to Dr. Richter, which took place above Bellinzona in 1515), Da Vinci says that, in his own times, “a mountain fell seven miles across a valley and closed it up, and also made a lake. And thus most



STUDY OF FLOWERS.  
(Windsor Library.)

mountain lakes have been made, as the Lago di Garda, the lakes of Como and Lugano, and the Lago Maggiore.”<sup>2</sup>

It is not impossible that Leonardo explored the Piedmontese slopes of the Alps, and especially the Marquisate of Saluzzo ; but his favourite regions were those about the Lake of Como. Starting from Lecco, he used to make his way into the Brianza mountains. It has, however, been ascertained that his geographical information about these neighbourhoods is not always quite exact. Thus he asserts that the four chief rivers which irrigate Europe—the Rhine, the Rhone, the Danube, and the Po—all have their origin at the foot of Monte Boso (Monte Rosa).<sup>3</sup> Any modern schoolboy could demonstrate the absurdity of this assertion.

The low land behind the Atlas, the bed of the famous “mare internum,” did not escape Leonardo’s attention. “It is not denied that the Nile is constantly muddy in entering the Egyptian Sea, and that its turbidity is caused by soil that this river is continually bringing from the places it passes ; which soil never returns in the sea which receives it, unless it throws it on its shores. Take, for instance,

<sup>1</sup> Richter, vol. ii. p. 205–206.

<sup>2</sup> Richter, no. 1092.—Nowadays it is generally admitted that the formation of mountains is due to inequalities in the contraction of the earth’s crust as it cooled, modified also by the pressure of the seas and by the flattening at the poles. I owe these explanations to the courtesy and erudition of Prince Roland Bonaparte.

<sup>3</sup> Uzielli, *Leonardo da Vinci e le Alpi*, p. 18.

the sandy desert beyond Mount Atlas, formerly covered with salt water." <sup>1</sup>

Leonardo's geographical studies come properly under the head of geology, for his interest was entirely given to physical geography. Logically enough, the other branches of the science were profoundly indifferent to him, like everything else that concerned history and politics.

Cartography must have reached a high point in Italy if we may judge from the maps of Leonardo, especially by that of Tuscany, in which the natural features, oreographic and hydrographic, of that province, are laid down with astonishing accuracy. He shows us Arezzo isolated in its marshes, Siena perched on its height, between Arbia, Chienna and Cie-cina <sup>2</sup>; Chiusi dominates a lake, large as an in-



STUDY OF A TREE.

(Windsor Library.)

land sea, which seems to communicate with Lake Trasimene. Like those of the principal towns, the names of rivers are written in small capitals followed by the letters FL. The names of minor towns are inserted in small letters.

A mistake has been made in associating Leonardo with the discovery of America. Following Ximenes, Grothe gravely alludes to a letter written by Leonardo in 1473, to Christopher Columbus, in which

<sup>1</sup> Richter, vol. ii. p. 265.

<sup>2</sup> Richter, pl. cxiii.

he discusses the possibility of reaching the East Indies by his, the explorer's, projected route!<sup>1</sup>

Even in the work of Uzielli we are told that we owe to Leonardo the oldest map extant bearing the name of America.<sup>2</sup> On this subject M. Henri Harrisse, the learned Americanist, writes to me as follows: "Among the papers of Leonardo now in England have been found the sections of a rude and elementary globe. These sections bear the name of America, and their configurations point to about the year 1515. Starting from this discovery, Mr. Mayor contributed a paper to *Archæologia* in which he contended that Leonardo himself was the author of the sections, an opinion now entirely abandoned. In any case, there are at least eight older maps of America, that of Juan de la Cosa, the pilot of Columbus, dated 1500; that of Alberto Cantino, made in 1502; that of Nicolay da Canerio, made in 1503; two maps published by Kunstmann in 1504, &c., &c."

With all these more abstract studies, Leonardo mingled practical applications and inventions, often of the humblest kind: vehicles, locks for canals, reduction-compasses with movable centres, instruments and machines of many kinds for drawing wire, twisting ropes, &c.

Leonardo, unlike most of his successors, laid down principles at the same time as he contrived applications; occasionally he even had the felicity of seeing his contrivances practically at work. He thus united in his own person three individuals, the theorist, the mechanical inventor, and the engineer, who are almost invariably distinct as M. Berthelot has so well explained in his work on Denis Papin. His drawings are enough to show that he was no mere theorist, but that he set his own fingers to the work, making machines and testing their efficiency for himself.

At the beginning of the seventeenth century the people of Milan were still using a number of machines invented by Leonardo. They cut and polished rock crystal, marble, and iron with his contrivances; they minced meat for sausages, and called in hydraulic power to supplement their own, with machines he had invented.

<sup>1</sup> *Leonardo da Vinci als Ingenieur und Philosoph*, p. 20.

<sup>2</sup> *Ricerche*, 1st edition, vol. i. p. 15; vol. ii. p. 322-323.



XV

*A Map of the Tuscan Coast.*

(WINDSOR LIBRARY.)







He was also distinguished as a military engineer. Indeed, if we may judge from his letter to Lodovico Sforza (see p. 144), it was in that department that he himself believed that he chiefly excelled.

Before we can arrive at trustworthy conclusions upon this side of his activity, we must, I think, determine with some exactness what his attitude towards the antique tradition really was.

Here, as in artistic matters, he took from the Greeks and Romans a great deal more than is usually supposed. His hero was Archimedes, whose biography he may have read in Plutarch's *Lives*.<sup>1</sup> Like the famous Syracusan, he flattered himself he could rout the enemy by the aid of his miraculous machines. But while Archimedes long held the Roman armies in check with inventions which, after all, he only put forward as more or less playful experiments in geometry, Leonardo never, so far as we know, succeeded in applying any of the apparently redoubtable contrivances of which he speaks.

A long series of drawings acquaints us with the more or less chimerical contrivances of Da Vinci. Sometimes he shows us horses armed with lances, at others chariots with hooks and scythes upon their wheels.<sup>2</sup> Here we see a sort of flying defence, a kind of screen, intended to shelter archers (M. Valton's collection and others), there, new sorts of battering rams, balistas, and catapultas.

The uselessness of most of these engines cannot be better indicated than by mentioning that Leonardo generally puts bows into the hands of his soldiers, just as though firearms had not long been discovered.<sup>3</sup>

<sup>1</sup> In one of his notes he writes down the names of the famous engineers of antiquity: Callias of Rhodes, Epimachus of Athens, Demetrius Poliorcetes, Callimachus the architect, Diogenes the philosopher of Rhodes, Calcedonius the Thracian, Febar of Tyre (Richter, vol. ii. p. 422). As for Archimedes, his name crops up continually. The inventions of Leonardo have, in fact, a curious parallel in those of Archimedes during the siege of Syracuse. But just as the genius of Marcellus was too much for the ingenuity of Archimedes, so would the guns of Louis XII. have made short work of Leonardo's machines, had they ever come into action. See Plutarch's life of Marcellus.

<sup>2</sup> Windsor, Grosvenor Gallery series, no. 51.—British Museum.—Library of the Institut de France.—Turin, Royal Library, no. 10.—Demetrius and Mithridates, to go no further back, employed chariots armed with scythes (see Plutarch's lives of Demetrius and of Sylla). Cf. Müller-Walde, p. 204-210.

<sup>3</sup> Maindron, *Les Armes*, p. 207.—In the army led into Italy in 1494 by Charles VIII., musketeers marched beside the archers, cross bowmen, and Swiss pikemen. (Fr. Delaborde, *L'Expédition de Charles VIII. en Italie*, p. 459.)

Elsewhere he proposes to asphyxiate besiegers with the smoke of feathers, sulphur, and di-sulphide of arsenic.<sup>1</sup>



FOWLER RELEASING A BIRD. AN EMBLEM OF SHORT-LIVED LIBERTY.

(Library of the Institut de France.)

With ideas like these, it was only natural that he should turn his attention to the composition of Greek fire, "fuoco greco," for which he gives the receipt in the most simple good faith.<sup>2</sup>

If Lodovico Sforza's artist did even more for him than he promised, his engineer did a great deal less. He nursed, indeed, the most curious delusions. When we compare his promises with the results he produced, it is difficult to avoid being irritated by his optimism, not to say his extravagant self-confidence.

He calmly proposed to the Milanese ruler as practical and well-tested methods what were, in fact, nothing more than experiments in a laboratory. Projects on paper, which would not have stood the test of experiment for a single moment, were recommended as if they were tried and infallible processes. Otherwise, Lodovico would have been invincible; if Leonardo had been able to fulfil his promises, the armies of Charles VIII. and Louis XII. would have been routed at the first discharge. It cannot be said that Da Vinci had no chance of using his amazing inventions. The wars waged by his two patrons, Lodovico il Moro and Cæsar Borgia, gave him plenty of opportunities. The truth is that he dwelt in an atmosphere of pure speculation, and felt no real interest in material results.

With such a man as Leonardo, however, we must not rest too long under the influence of such unfavourable ideas as these. He was one of the first to re-



SKETCH FROM ONE OF LEONARDO'S SCIENTIFIC MANUSCRIPTS.

(Library of the Institut de France.)

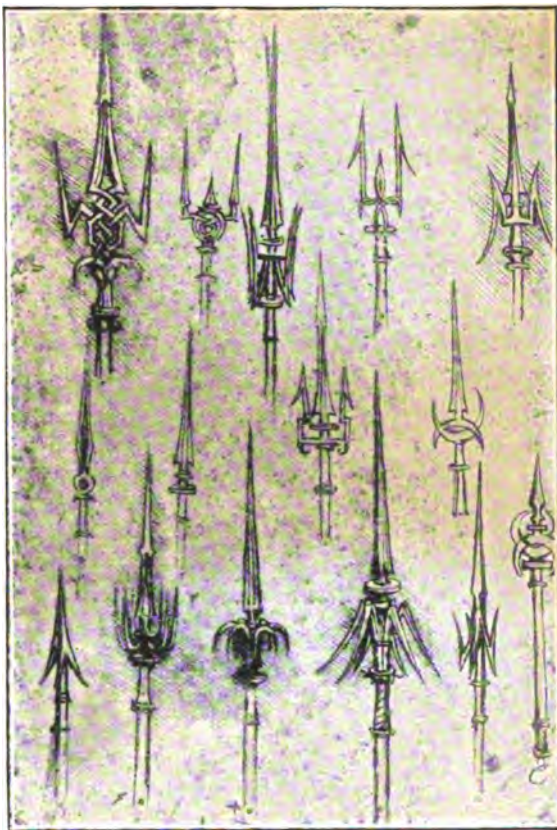
<sup>1</sup> Ravaisson-Mollien, *Les Manuscrits*, vol. ii. fol. 63, verso. Cf. fol. 69, verso ; 72.

<sup>2</sup> Richter, vol. ii. p. 280-281.—Beltrami, *Il Codice di Leonardo da Vinci*, fol. 43. Cf. p. 306.

commend the use of mines for the destruction of fortifications. He anticipated the inventors of our own time in suggesting breech-loading guns, and mitrailleuses with many barrels, fixed or movable (*Codex Atlanticus*).<sup>1</sup> According to information I have received from M. Henry de Geymüller, certain engines of this nature are to be found in many collections of arms, among others in that of Venice.

No doubt his advice on the construction of flying bridges also contains many valuable suggestions.<sup>2</sup>

Leonardo seems to have put his pencil at the service of fencing-masters, among other people. Lomazzo tells us that he drew for Gentile dei Borri the different positions of a horseman fighting with a man on foot, and showed "how a man on foot may attack a horseman, or defend himself against



DESIGNS FOR OFFENSIVE WEAPONS.  
(Library of the Institut de France.)

one, taking account of the difference in their arms. It is a great pity," Lomazzo goes on to say, "that this work has not been given to the public; it would have added glory to that wonderful art."<sup>3</sup>

<sup>1</sup> Müller-Walde, in his *Leonardo da Vinci*, gives an ample dissertation on the firearms invented or improved by the master (pp. 184-197, 211, *et seq.*).

<sup>2</sup> Müller-Walde, p. 161-170.

<sup>3</sup> In a drawing published by Gerli (pl. vii.), a horseman armed with a lance charges a foot soldier, who defends himself with a lance-shield, shaped like an umbrella. This is Lomazzo's commentary: "Ma ritornando ai professori delle armi, eccellente appresso ai



In the matter of hydraulics, Leonardo has hitherto passed for the inventor of many practical innovations, and also of a vast number of mere projects, the credit for which must be withdrawn from him in view of recent researches, especially those of Beltrami.

Take, for instance, his innovations in the making of locks.

According to Fumagalli, Leonardo invented the sluices contrived in lock gates, and substituted the sliding sash system of fixing them, for the vertical double doors on hinges. In short, he refers the whole modern system of working locks to Leonardo.

The truth is that the system of having practicable sluices in the gates of locks was made use of before the time of Leonardo. In 1481 the Venetians had constructed a lock on this system on the Piovego; while Filippo Maria Visconti had caused one to be made as early as 1440: "Meditatus est et aquæ rivum, per quem ab Abbiate Viglevanum usque sursum veheretur, aquis altiora scandentibus machinarum arte, quas conchas appellant. . . ." "It is obvious," adds Venturi, "that the historian looked upon it as a common and well-known contrivance which had already received a name of its own." In the *Trattato d'Architettura*, compiled in 1450 at the very latest, L. B. Alberti describes the whole system in all its details.<sup>1</sup> It is even possible that locks on this system were known as early as the fourteenth century.

Let us now turn to Leonardo's canals. Vasari declares that Leonardo, while still a youth,<sup>2</sup> elaborated a scheme for a navigable canal between Florence and Pisa. He did not propose to embank and dredge the Arno, as Viviani did later, but to dig a separate canal, which should start from the Arno and traverse the districts of Prato, Pistoia,

nominati fu Gentile dei Borri, al quale Leonardo Vinci designo tutti gli uomini a cavallo, in qual modo potevano l'uno dallo altro defendersi con uno a piedi, ed ancora quelli che erano a piedi come si potevano l'uno e l'altro defendere ed offendere per cagioni delle diverse armi. La qual opera è stato veramente grandissimo danno che non sia stata data in luce per ornamento di questa stupendissima arte." (*Trattato*, lib. vi. cap. xl.) The designs are believed to be those in the *Trattato di Scienza d'arme* of the Milanese, Camillo Agrippa (1553). (Amoretti, pp. 129-130.)

<sup>1</sup> Beltrami says that the famous architect and engineer of Siena, Francesco di Giorgio Martini, had described the system of coupled basins as early as 1447. But this date is clearly wrong, as Francesco was only born in 1439.

<sup>2</sup> According to Milanesi, this scheme dates from the year 1500. (Vasari, vol. iv., p. 89.)

Serravalle, and the lake of Sesto. Leonardo discusses the methods of supplying the canal with water, the cost of construction, the mode of dealing with the streams which cross it, etc. (*Codex Atlanticus*, f. 45-92.)

To Milan, cut off both from the great lakes and the main rivers of northern Italy, the question of inland navigation has been at all times vital. So the public gratitude to Leonardo, which credits him with the whole of these great works of canalisation, is easily understood.

"Under a burning sky"—I quote from Stendhal—"Leonardo carried water into every corner of Milanese territory. It is to him the modern traveller owes the admirable landscapes, in which the fertility and verdure of the foreground are only equalled by the fantastic shapes of the snow-covered mountains, standing upon the distant horizon for the delight of the eye."<sup>1</sup>

Now as early as the twelfth century, Lombardy could boast of considerable hydraulic works, some for irrigation, some, very probably, for navigation. In the following century the waters of the Adda were drawn upon at Cassano to form the Muzza; in the fourteenth, the stream taken from the Ticino was brought down to Milan, the canal to Pavia was made, and the Po was brought under proper control from Pont' Albero to the mouth of the Lambro.

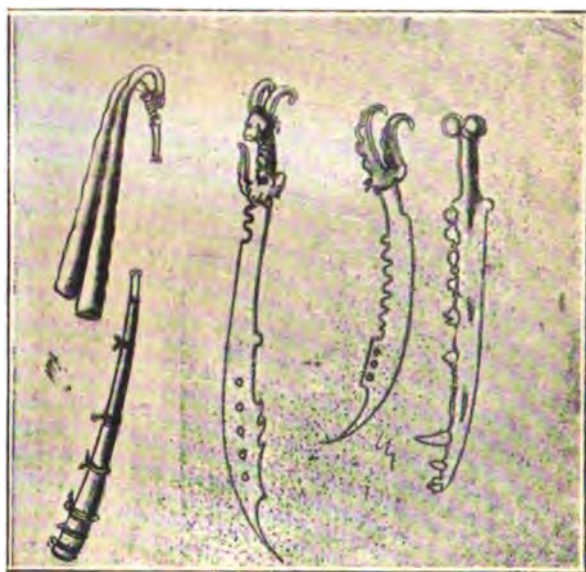
The desire to connect Verbano, from which the marble used in building Milan Cathedral was drawn, with the centre of the capital, led, about the end of the fourteenth century, to the proposal to put the "Naviglio Grande" in direct communication with the great ditches by which the city was surrounded. To do this a difference of level of about five "braccia" had to be neutralised. The level of the connecting canal was raised by suspending, at certain hours, all demands upon its water supply and by temporarily closing its outfall. As early as 1395 materials were thus transported "per navigium novum ad Logetum Sancti Stephani," that is to say, to the reservoir communicating with the city moat.

This system, however, had one drawback: it interrupted for more or less lengthy intervals the supply of water for other purposes than navigation. Two locks were therefore constructed by which

<sup>1</sup> *Histoire de la Peinture en Italie.*

the variations of level could be strictly confined to a part of the stream sufficient to contain the rafts and boats to be accommodated, and reservoirs were formed to enable the level of the water to be raised and lowered at will.

All Leonardo's biographers have shown a desire to claim for him the exclusive credit of having formed the Martesana canal.<sup>1</sup> The dates, however, are stubborn. As early as 1457, when Leonardo was but five years old, Duke Francesco Sforza ordered this canal, which starts from the Adda, to be begun. One of his engineers,



DESIGNS FOR WEAPONS.  
(Library of the Institut de France.)

Bertola da Novate,<sup>2</sup> pushed on the work with such energy that the ducal government was able to proceed to the regular sale of the water brought down by the canal as early as 1465. Lodovico Il Moro also turned his attention to the Martesana. He not only proposed to increase its output of water, but also to make it navigable as far as the lake of Lecco. But as the Adda makes a

very long "détour" below Brivio, and as its stream is here too rapid, Lodovico thought it would be a good thing to make a canal above Brivio by which boats could descend, rejoining the Adda when the river again became navigable. The documents are silent as to the name of the engineer to whom this enterprise was entrusted. Neither does it appear that it was prosecuted with any great energy.

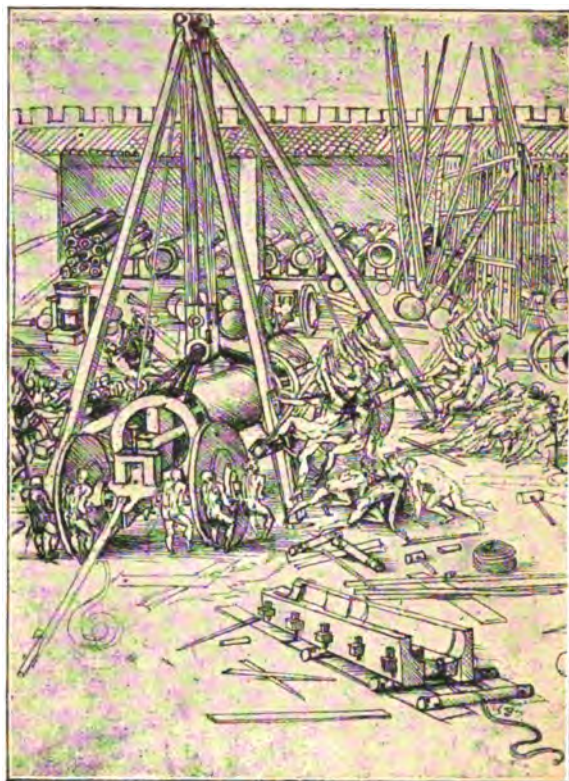
<sup>1</sup> An exception must be made in favour of Pagave, who has reduced Leonardo's share in the construction of this canal to its due proportions. (See Vasari, Della Valle edition, vol. v., p. 63-64.)

<sup>2</sup> Not Bertolino da Novara, as some have asserted.



In 1496 the engineering problems connected with it were still under discussion. Are we to credit Leonardo with the work? The fact is that, in 1496, Leonardo's name appears on the list of the duke's engineers, and he has left among his writings certain accounts of expenditure and notes of levels relating to the navigation of the Adda near Brivio. But we must add that from 1494 onwards, the name of Bartolommeo della Valle figures on the same list, and that the said Bartolommeo was the identical engineer to whom, with Benedetto da Massalia, was entrusted, in 1516, the expenditure of Francis I.'s subsidy of 10,000 ducats in aid of these very same works. It is natural to suppose that when the undertaking was commenced by Il Moro, it was also to him that the inauguration of the work was entrusted.<sup>1</sup>

According to Beltrami, work on the Martesana may, then, be divided into two distinct periods; the first, before the arrival of Leonardo, corresponds to the making of the canal from Trezzo to Milan, for which Bertola da Novate was the engineer; the other period, posterior to Leonardo's departure for the French court, includes the studies and other preparations of Della Valle and De Massalia for the Paderno canal. Although described by Carlo Pagnano as early as 1520, this



A CANNON FOUNDRY.  
(Windsor Library.)

<sup>1</sup> *Leonardo da Vinci e il Naviglio Grande*. My account of the various canals in the Milanese province attributed to Leonardo is borrowed from this work.

second enterprise was not completed until near the end of the sixteenth century, under the direction of Meda.

Beltrami's argument is close, as we must allow, and yet I feel some hesitation in admitting that Leonardo had nothing to do with the making of the Martesana. We have incontestable evidence that ten years later, between 1508 and 1510, he was directing important works on this very same water-way—works on which I shall have something to say in a future chapter.

The *Codex Atlanticus* contains some further schemes for canals, such as those for a canal to unite Cesena with Porto Cesenatico, and for canals which were actually made in Friuli.

As for the scheme for a canal to be constructed near Romorontino, of that I shall have to speak in a chapter devoted to the activities of our artist-engineer in France.

I have now said enough to show that Leonardo was not only an Utopian dreamer, but that he was also an engineer of the greatest ability, to whom the science of hydraulics especially is indebted for much of the splendid progress it has made.

The making of canals has its natural pendant in undertakings for the raising and reclamation of the marshlands they traverse. Leonardo was not the inventor of the usual process employed for this purpose, for it had been practised in Tuscany as early as the twelfth century, but he was the first to give exact instructions for it.

Did Leonardo ever think of publishing the results of such arduous and fruitful investigations? The mystery with which, as engineer and theoretical mechanician, he so carefully surrounded himself, and the precautions he took against any undue filching from his manuscripts, prove at least that even if he kept publication in view as a final end, he was in no hurry meanwhile to give his discoveries to the world through the Press. Unlike his brother Florentine, Leone Battista Alberti, who took pride in writing for humanity at large,<sup>1</sup> he wrote for himself. In a collection of scientific notes at Holkham is to be found a most suggestive declaration (made in connection with a sort of diving-dress): "In view of the wickedness of men, I do not publish or divulge the method I have invented for remaining under water, for they (men)

<sup>1</sup> "*Non nobis sed humanitati scribimus.*"

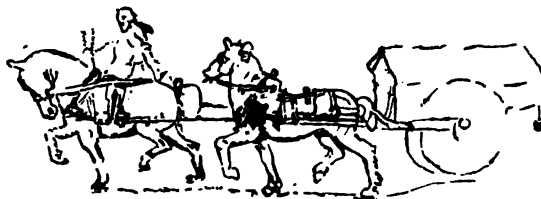
would make use of it in order to commit murder at the bottom of the sea, by destroying vessels and causing them to sink, together with those on board.”<sup>1</sup>

Although he would have nothing to do with esoteric principles, the head of the Milanese Academy had no idea of stripping himself for the benefit of the first comer. We cannot doubt that his curious system of writing, adopted as early as 1473, was intended to protect the invaluable discoveries set down in his note-books against the common herd. He took no less care to prevent unauthorised intrusions into his laboratory. This we know from a letter in which he speaks of one Giovanni, a German, and maker of mirrors, who worked near him in the Vatican ; he declares that the said Giovanni continually strolls into his atelier, spying upon him in order to criticise him. A suspicion of this sort was a pardonable weakness in the days when Leonardo lived. No journals then existed in which discoveries could be announced and their paternity proclaimed, no patents and patent offices in which the inventor could be secured against the plagiarist.

Self-centred as he was, Leonardo (to quote Madame Raffalovitch) “was a sower of ideas, but a sower who was not to see the harvest. His writings are like those grains of wheat which, though lying for ages inert in tombs, germinate as soon as they are restored to the conditions required for development. They only came out into the light long after his death. He stored up the fruit of his hard work and study without making any effort to bring them to the knowledge of his contemporaries. Did he think of posterity at all ? Did he count upon an appendix, as it were, to an existence so full that it had something of immortality about it ? How invaluable for us his manuscripts would have been had he revised, arranged, and annotated them himself ! He

<sup>1</sup> The works of Leonardo were better known than he thought, as we may gather from the following quotation from Cardan's *De Subtilitate* (p. 317, edition of 1550). After proclaiming that a painter is at once a philosopher, an architect, and a “dissectionis artifex,” Cardan goes on to say : “Argumento est præclara illa totius humani corporis imitatio, quam jam pluribus ante annis inchoatam a Leonardo Vincio Florentino, et pene absolutam (scimus?), sed deerat operi tantas artifex ac rerum naturæ indagator, quantus est Vessalius.” Biondo, whose *Eulogy of Painting* appeared in 1549, also mentions Leonardo's treatise on anatomy. We know, moreover, that Cellini acquired the treatise on sculpture, painting, and architecture, and that Serlio borrowed it from him and made use of it in his own book on perspective.

did not choose to do it! Why? Was it through indifference to glory, through an over lofty ambition, through carelessness, through contempt, through modesty, or simply because he had no time? Whichever it was, fatality or deliberate intention, we cannot tell, and have only to bow resignedly before his tomb. For us the secret of Leonardo is in his works, and there we must seek it. The grave and majestic figure of the master greets us on the threshold of the enchanted world he has created, a world in which grace, more potent than beauty, reigns supreme. In Leonardo's soul the genius of art and the genius of science are fused into an ideal which shares the nature of both." A profound savant and an incomparable creator, he is the only man in the history of our race who has at once penetrated into the most secret hiding-places of truth and evoked visions of the most radiant beauty, who has united the science of Aristotle with the art of Phidias.



SKETCH OF A WAGGON AND HORSES.  
(Library of the Institut de France)



DESIGN FOR WAR CHARIOTS.  
(British Museum.)

## CHAPTER IV.

THE DOWNFALL OF LODOVICO IL MORO—LOUIS XII. AT MILAN—LEONARDO'S JOURNEYS TO MANTUA AND VENICE—HIS RELATIONS WITH THE MARCHESA ISABELLA D'ESTE—HE ENTERS THE SERVICE OF CÆSAR BORGIA—HE RETURNS TO FLORENCE—THE "SAINT ANNE."



HEAD OF AN OLD MAN.  
(Bonnat Collection.)

WHO does not know the story of Il Moro's miserable end—punishment richly deserved indeed, but merciless in its severity?

On August 31, 1499, on the approach of Louis XII., Lodovico sent his two sons into Germany, together with their tutors, and the Cardinals Ascanio Sforza and Federigo San Severino; at the same time despatching his treasure,—amounting at that moment, without reckoning 150,000 ducats left in the Castle at Milan, to some 240,000 ducats and a huge quantity of pearls—to the realm of his nephew, the Emperor Maximilian.<sup>1</sup> He himself left Milan on September 21, to pursue the same road. In the extremity of his despair, and the depth of his degradation, he was inspired, for the second time, with one of those ideas which have earned his name the loathing of every Italian heart. On a former occasion he had called Charles VIII. to his aid against the threatened onslaught of the King of Naples. This time, he attempted to incite the Sultan, the bitterest enemy of Christendom, against Louis XII. and the Venetians. His friend and contemporary, the chronicler Corio, bears witness to the fact.<sup>2</sup>

Recalled, within a few months, to Milanese territory, owing to

<sup>1</sup> Corio, *Historia di Milano*, p. 978—984.

<sup>2</sup> *Ibid.*, p. 977—981.

the dissatisfaction caused there by alien rule,<sup>1</sup> Lodovico re-entered his capital in triumph, on February 4, 1500.<sup>2</sup> But before long a fresh invasion by the French imperilled his evanescent power. Betrayed near Novara by the Swiss, the Duke was by them handed over to a pitiless conqueror (April 10).<sup>3</sup>

Up to the present day, every historian has refused, once the curtain has dropped on the closing act of this drama, to cast even a hasty glance upon the former ruler of the Milanese, the patron of Leonardo and Bramante. In their sight he was dead, in the civil sense. The men of his own time, and those who have come later, have been equally inexorable. True it is, that when Lodovico opened a road into his fatherland for a foreign foe, he committed a crime of which no just person can possibly acquit him. But, speaking for myself, I have not found it in my heart to turn thus from a man who rendered such brilliant service to the cause of the beautiful, and called so many masterpieces into existence; I have felt impelled to learn how this understanding, marked by so profound a worship for art, and peopled by such brilliant fancies, was finally laid low.

Information concerning Lodovico's private life during those

<sup>1</sup> The part played at this juncture by Leonardo's friend, Jacopo Andrea (see vol. i., p. 101) is clearly evident. These are the words of the chronicler, Jean d'Auton (Dec. 1499): "And as it is a hard matter to satisfy the combined appetites of a multitude, the King had no sooner accepted the general will than many considered themselves hardly used; and among others one Messire Jacome Andrée, varlet de chambre of the Duke Lodovico (whose property the King had confiscated, giving it to his own physician, Maistre Théodore), and another, named Nicholas, barber-surgeon of Milan. These sought out Lodovico in Germany, and made him many fair promises; and Jacome Andrée affirmed that before fifteen days had passed his hand should be dipped in the blood of his lordship, Jehan Jaques, and he would have compassed his death; and Nicholas, the surgeon, boasted that he would raise the commune of Milan against the French who were lodged there, and go from house to house, persuading and inducing every Milanese to slay his guest, and to kill all they might find at their mercy, giving quarter to none.—(May, 1500.) All the conspirators and authors of this rebellion who could be taken and handed over to justice, suffered the capital sentence, and were publicly executed in the square before the Castle at Milan, among them Jacome Andrée, Nicholas the surgeon, Messire Louys de Pors, and the Captain de Trectz. Their indictment was made by Messire Michel Riz, doctor, and by the captain of the city, and their sentence was carried out by the King's lieutenant, the Sire de la Trimouille." (De Maulde's edition, vol. i., pp. 139, 277, 278).

<sup>2</sup> The very curious letter in which he describes this ceremony to his sister-in-law, Isabella d'Este, is reproduced by Luzio and Renier (p. 155—158).

<sup>3</sup> It was an Italian resident at the French Court, one Fausto Andrelini, who celebrated the capture of his fellow-countryman in Latin hexameters, *De Captivitate Ludovici Sphoriciæ*. (1st edition undated, 2nd edition, Paris, 1505.) See also Carranti's *Ludovici Sfortiæ Captivitatibus*, Bologna, 1507.

eight years of slow agony is, alas, but scanty. We only know that the former ruler of Milan was conducted first to Susa, and then to Lyons, escorted by 200 archers of the guard, and several gentlemen. At Lyons "grand nombre de gentilshommes de cheux le Roy luy furent au devant. Le prévost de l'ostel le conduisit tout le long de la grant rue, jucques au chasteau de Pierre Encize, et là fut logé et mys en garde seure. Ce séjour fut illecques quinze jours, durant quel temps, par les seigneurs du grand conseil du roy de plusieurs choses fut interrogué, lequel supposé qu'il leur faict que foue toutesfoys moult sagement parloit." ["A great number of the King's gentlemen came to meet him. The provost conducted him all along the main street to the castle of Pierre Encize, and there he was lodged and put in safe ward. His sojourn there lasted fifteen days, during which time he was questioned on many matters by the lords of the grand council, and though he may have acted right foolishly, he nevertheless spoke right wisely."] From Lyons he was transferred to the Château du Lys Saint George, in Berry, and made over to the charge of a gentleman named Gilbert Bertrand. Four or five years later, Louis XII., with that cruelty characteristic of weak natures, immured his prisoner in the donjon of Loches without even allowing him (this fact was given to Paolo Giovio by an eye-witness) the use of pens and ink—"erepto scribendi solatio."<sup>1</sup> There the unhappy man died on May 27, 1508. He was only fifty-seven years of age.

Spurred by a feeling of compassion, very easily explained with regard to so great a benefactor of the arts, I undertook, some years ago, a journey—I had almost said a pilgrimage—to the keep wherein

<sup>1</sup> Monsieur de Maulde la Clavière treats Louis XII.'s supposed severity to his captive as an idle tale. (*Chroniques de Louis XII. par Jean d'Auton*, vol. i., p. 279, etc.) The learned historian brings forward a series of testimonies tending to prove the conqueror's innocence. Saint-Gelais states that "as regards his person, he was always as well treated as he could have been in his greatest freedom and power." "Humanely treated," says Seyssel. "In a strong castle, where he is still detained, in spacious and honourable captivity," says the *Ystore Anthonine*. The Milanese historians make no reference to any ill-treatment. (Castellus, *Compendium*, 6, 172, fol. 41 v°.) Prato relates, on the other hand, that at Loches, where Ludovico enjoyed a certain amount of liberty, he corrupted his keeper and escaped in a cart laden with straw, but he lost his way in the woods and was hunted out and recaptured the next day (1508). Then it was that his captivity was made more severe. He died a natural death on May 27 in that same year. A gentleman in waiting, who had obtained permission to remain with him, P. F. Pontremulo, then returned to Italy, and told his own story concerning the trials endured at Loches.

the greatest of Leonardo's patrons languished for so long. The position of the Castle is incomparably beautiful. But the horror of the subterranean dungeon, in which the unhappy Milanese prince was confined, beggars all conception. The walls are nothing but blocks of naked rock, the floor the bare caked earth. The martyr's only pastime, it is said (I do not vouch for the truth of the story), was to paint rough sketches on his prison walls, a last memory of that enlightened protection bestowed on art, on Leonardo, on Bramante, which, in the calm eye of history, must counterbalance Lodovico's crimes against his kinsfolk and his fatherland.

By a coincidence which seems worthy of remark, Leonardo himself died, a few years later, in France also, and in Touraine, some eighteen miles from Loches, while the Marshal di Trivulzio, the bitterest of Lodovico Sforza's foes, ended his days at Chartres.

Lodovico's fall was the greatest misfortune which could have overwhelmed Leonardo. It reduced him to the necessity, just as old age was closing in upon him, of seeking another patron—(who was slow to appear)—of beginning his career again, a career which had been more fruitful hitherto, in masterpieces, and the admiration they had won, than in tangible reward, and exposed him, in fine, to the danger which had hung over his whole life, that of the dispersal and frittering away of his admirable powers. Whatever indecision may have appeared in the policy of Lodovico il Moro, whatever fluctuations and weaknesses he may have displayed, where artistic matters were concerned, at all events he succeeded in eliciting, on the part of the artists attached to his service, the most effectual co-operation, a consistent course of effort, and works destined to endure for centuries. Nothing can be more unjust, in this connection, than Leonardo's own bitter outbreak against his former patron. "Buildings by Bramante—(left unfinished). The Governor of the Castle made a prisoner. Visconti taken away captive, and his son slain. Gian della Rosa stripped of his money. Bergonzo began, then refused (?), and afterwards Fortune fled away. The Duke lost his realm, his fortune, and his liberty, and not one of his undertakings was concluded by him."<sup>1</sup>

<sup>1</sup> Amoretti, pp. 79, 81. Did Leonardo return to Florence in 1495? Vasari asserts that the Grand Council Chamber, begun in 1493, was built by Il Cronaca, according to



Bereft of his patron's strong guidance, the artist tossed to and fro like a rudderless bark, ready to dash itself to pieces on the nearest reef.

When Louis XII. made his triumphal entry into Milan, on October 6, 1499, accompanied by Cæsar Borgia, and a bevy of great lords, the wonders wrought by Leonardo's brush and chisel were among the first objects to fix his attention. So ecstatic was his admiration of the *Last Supper*, that for a moment he dreamt of carrying it off to France, together with the wall on which it was painted. He was no less fascinated by the equestrian statue of Francesco Sforza. This we know by the answer sent in his name to the Duke of Ferrara, by the Cardinal d' Amboise. Did not the Cardinal commission the Ferrarese ambassador, on September 24, 1501, to inform his master that as the King had seen the work in question, he (the Cardinal) could not dispose of it without his sovereign's consent? (See vol. i., p. 154.)

Yet, for some cause or other, Louis XII., who, indeed, left Milan, and returned to France on November 7, 1499, allowed several years to elapse before he finally attached the author of these master-pieces to his own service.<sup>1</sup>

Leonardo, on his side, went to Mantua, to the Marchesa Isabella d'Este.

His departure from Milan took place somewhere during the latter months of the year 1499, very shortly after the occurrence of the disasters which overwhelmed Il Moro. If we are to believe Leonardo's friend Pacioli, he betook himself straight to Florence. But, as a matter of fact, he did not reach his native place till after he had made a stay, albeit a short one, at Mantua and at Venice.

Leonardo's suggestions ("preso parere con Leonardo da Vinci, Michelangelo Buonarroti ancora che giovanetto, Giuliano da San Gallo, Baccio d'Agnolo"). He vouches for the same fact in his *Life of Leonardo*. (Milanesi's ed., vol. iv., p. 448; vol. v., pp. 41, 351.)

<sup>1</sup> A letter from Pietro da Nuvolaria to Isabella of Mantua (April 4, 1501) does indeed assert that Leonardo, even at that date, was in the service of the King of France, and that he was working on a small picture intended for Florimond Robertet, the King's favourite. But this bond was certainly a very slight one. Even two years later Leonardo was boasting that he could seek his fortune elsewhere, without falling into disgrace with his patron. (Letter from Nuvolaria, April 14, 1503.) And during this interval he had actually accepted the commission to paint his *Saint Anne*, and had attached himself to the fortunes of Cæsar Borgia. Finally, between the years 1503 and 1506, he undertook commissions for the Florentine Government, which kept him for several successive years in the city of his birth.

The name of the Marchesa Isabella d'Este, wife of Giovanni Francesco di Gonzaga, and sister-in-law of Lodovico Sforza, calls up the figure of the most accomplished woman of the Italian Renaissance. In her person, a boundless eagerness for intellectual pleasures, and an exquisite taste, were combined with the highest moral virtues. Irreproachable as a wife, at once wise and tender as a mother, a patriot during that critical period, when patriotism suffered so utter an eclipse—(she it was, who, when she heard of the gallant resistance of the city of Faënza, besieged by Cæsar Borgia, exclaimed, "They have saved the honour of Italy!")—she counted all the men who shed most glory on the Renaissance among her clients, her friends and her admirers.

Notwithstanding her own frequent journeys to Milan,<sup>1</sup> Isabella does not appear to have entered into personal relations with the painter before this visit of Leonardo's in 1499. At the most she seems to have written to Cecilia Gallerani, in 1498, to beg she would send her Da Vinci's portrait of herself. (See vol. i., p. 206.)

It was certainly during this visit to Mantua that Leonardo painted the portrait with reference to which one of the Marchesa's correspondents gives us the interesting details following: "Most illustrious lady, I send you, by the bearer, a large lute in the Spanish fashion, made of walnut wood, in its natural colour, which truly seems to me the best that will ever be heard. I have been ill. I have not been able to finish the black and white lute. I will make it like this one, in the Spanish fashion. Leonardo da Vinci is at Venice; he has shown me a picture of your Highness, which is very natural, and appears to me as perfect as it can be. This is all I have to write you by this messenger. Assuring you once more of my respect, I write myself your Highness's faithful servant, Lorenzo da Pavia, Venice, March 13, 1500."<sup>2</sup>

In a letter to Leonardo, dated May 14, 1504, the Marchesa adds a precious item of information concerning this picture. "When you came to this country and drew our portrait in charcoal, you promised you would some day paint our picture in colours. ("Quando fusti in questa terra, e che ne retrasti di carbone.")

We now know, thanks to the research of Charles Yriarte, that one

<sup>1</sup> Luzio and Renier, *Delle Relazioni di Isabella d'Este Gonzaga con Lodovico e Beatrice Sforza*. Milan, 1890.

<sup>2</sup> Baschet, *Aldo Manuzio*. Yriarte, *Gazette des Beaux-Arts*, 1888, vol. i., p. 122.



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*Portrait of the Marchesa Isabella d'Este*

(THE LOUVRE)



Printed by Draeger, Paris



memorial of Leonardo's intercourse with Isabella is preserved to us. This is the admirable cartoon in the Louvre, said, for many years, to represent an unknown person.

As early as the month of March, 1501, the Marquis of Mantua had given away his wife's portrait, a fact which obliged her to ask the artist to provide her with another sketch.<sup>1</sup>

The Mantuan gallery appears to have contained another portrait by Leonardo. A letter written in 1531 refers to "quello (quadro) di Leonardo Vinci che donò il Conte Nicola (Maffei)." In 1627 an inventory mentions "un quadro depintovi une testa d'una donna scapigliata bozzata, opera di Leonardo da Vinci," valued at 180 lire.<sup>2</sup>

Leonardo's departure did not interrupt his relations with the learned and witty Isabella. Though I break the chronological order of my story, I will forthwith trace the incidents of a friendship which honours the princess as much as the artist. It was limited, indeed, to an exchange of correspondence. Leonardo's nature was such that the work undertaken by him for his various patrons rarely passed beyond the sphere of platronics.<sup>3</sup>

With characteristic pertinacity the Marchesa pursued, for years her fixed idea—to induce Leonardo to paint a picture for her study, the "studio" in which the compositions of Mantegna, Perugino, and Lorenzo Costa, were to hang. On March 22, 1501, she manifested this desire to her Florentine correspondent, Fra Pietro da Nuvolaria: "Most Reverend Father,—If Leonardo, the Florentine painter, is now at Florence, we beg you will let us know what kind of life he leads—that is to say, whether he has any work in hand (as we have been told), what kind of work it may be, and if he is to remain long in the city. Your Reverence might be kind enough to inquire, as for yourself, whether he would be willing to undertake a picture for our

<sup>1</sup> "Apresso lo pregara ad volerne mandare un altro schizo del retracto nostro, perrochè lo Ill. S. nostro consorte ha donato via quello che'l ce lassò qua, che'l tutto haveremo non mancho grato de la R.V. che da esso Leonardo. Mantuæe, xxvii. martij, 1501."

<sup>2</sup> *Archivio storico dell' Arte*, 1888, p. 184.

<sup>3</sup> Charles Yriarte has translated and made learned comments (in the *Gazette des Beaux-Arts*, 1888—vol. i., p. 123—131) on the correspondence between the Marchesa and her agents as to Leonardo. Signor Luzio, on his side, has published the Italian text in *I Precettori d'Isabella d'Este*, Ancona, 1877. Cf. *l'Archivio storico dell' Arte*, 1888, p. 45-46.

cabinet ("studio"). If he accepts the offer, we would leave the composition and the time of execution to him. But if he were to object, you might at least persuade him to paint us a little picture of the Madonna, full of faith and sweetness, just as his nature would enable him to conceive her. For all this, we should be grateful to your R  verence, and to the said Leonardo."

Meanwhile the Marchesa appealed to Leonardo's sagacity for an opinion on certain precious vases, purchase of which was suggested to her by her Florentine agent, Francesco Malatesta. "We desire," she replies to him March 3, 1502, "that you show these vases to some competent person, such as Leonardo da Vinci, the Milanese painter, who is our friend, if he is at Florence, or to any other person you may think fitting, and consult him as to their beauty and quality."

In 1504 the Marchesa makes fresh attempts to get the picture. On May 14 she writes to her agent, Angelo del Tovaglia: "As we very eagerly desire to possess some work by Leonardo da Vinci, whom we know, not by reputation only, but personally, as a very remarkable painter, we write him, in the enclosed letter, a request that he will paint us a figure of the Child Christ, in his twelfth year.<sup>1</sup> You will present our missive to him, and will add such commentary as you may judge most likely to persuade him; we will pay him well, and if he seeks to excuse himself on the score of the work on which he is now engaged for the Signory, you can say this will be a diversion, which will rest him after the history."<sup>2</sup>

Enclosed in this letter was another, intended for the artist himself: "Master Leonardo,—Hearing you are settled in Florence, we have conceived the hope of realising our desire . . . . When you came to this country, and drew our portrait in charcoal, you promised you would one day paint our picture in colours: but understanding that it would be difficult for you to fulfil your promise, since you would have to come here, we beg you to be good enough to keep your engagement with us, by replacing our painted portrait by a Child Christ, at the age of about twelve years—that is to say, the age at which he disputed in the Temple—and to carry it out with that charm and sweetness which characterise your art to such a high degree. If you will grant our

<sup>1</sup> *Christ among the Doctors.*

<sup>2</sup> The *Battle of Anghiari*, on which Leonardo was then engaged.



desire, apart from the payment, which shall be fixed by yourself, we shall remain so deeply obliged to you, that we shall never be able to acquit our debt."

Leonardo, however, put off the Marchesa with promises. "Your letter came to hand, and with it Leonardo's," Tovaglia replies. "He has promised me he will execute the work in certain hours which he will endeavour to snatch from that which he is doing for the Signory. I will not fail to stir up Leonardo and also Perugino. They both, truly, have promised me to act, and their will seems good, but my feeling is that it will be a struggle as to which comes in last. I hardly know which will win, but I should be inclined to wager it will be Leonardo."

On October 30, the Marchesa returns to the charge. "You have sent me word by Signor Angelo," she writes to the artist, "that you would very willingly satisfy my great desire. But the numerous orders you have make me fear you may have forgotten ours. We have therefore thought it fitting to write you these few words, to beg you, when you are weary of Florentine history, to seek relaxation in this little figure."



MEDAL OF THE MARCHESA ISABELLA D'ESTE.

In 1506, Isabella took advantage of a traveller's presence in Florence to renew her pressure. A relative of the artist's, Alessandro degli Amatori (probably the brother of Ser Piero da Vinci's first wife), undertook, as is shown by his letter dated March 3, to plead ceaselessly with his nephew. "Here, in Florence, at every instant, I represent the interests of Your Highness with Leonardo da Vinci, my nephew, and I never cease pressing him to give you satisfaction with regard to the figure you have requested from him. . . . He has promised me he will begin the work soon . . . and if, up till the time I leave Florence, you will be pleased to specify to me whether you prefer to have one figure or another, I will do everything to ensure his carrying out your will."

Leonardo, as Fra Pietro da Nuvalaria had predicted, won the laggard's prize at last, and the Marchesa, thoroughly disheartened, put away her hopes. From 1506 onwards, no trace of any correspondence between her and the all too unpunctual Florentine is to be found.

I now retrace my steps to follow Leonardo's peregrinations through Italy, after the downfall of Il Moro.

Early in the year 1500 he was at Venice—as is proved by the letter from Lorenzo da Pavia, quoted above. The artist himself also mentions this journey, though incidentally, in a note published by Dr. Richter.<sup>1</sup> From it we gather that one, at least, of his pupils, Andrea Salai, bore him company.

The period between 1501 and 1514 is certainly that which gave birth to the greater number of the pictures painted by Leonardo, then over fifty years of age. Having no more orders for monumental works (except for the *Battle of Anghiari*), he turned his attention to more modest productions. Happy necessity! to which we owe the *Saint Anne*, the *Mona Lisa*, the *John the Baptist*!

During this interval, Leonardo solved the secret of carrying on his engineering labours and his work as a painter conjointly, and moved perpetually hither and thither between Florence and the towns of Umbria and the Romagna.

The last period of Leonardo's career, the evening of that splendid life, opens with a regrettable determination, with what I will call a moral eclipse, a capitulation of his conscience: disheartened, the master entered the service of Cæsar Borgia, as his military engineer.

The fate which weighed on the Italy of the Renaissance ordained that her three greatest artists should serve her victims and her executioners in turn. Even as Leonardo was forced to wield his brush in honour of Lodovico il Moro and Louis XII., or to serve the Dictator of the Romagna—so Raphael, after having celebrated the glories of his rightful sovereign, the Duke of Urbino, was fain to make up his mind to work for that sovereign's despoiler, Lorenzo de' Medici. Even young Michelangelo himself, despite his haughty nature, could

<sup>1</sup> *Great Artists—Leonardo*, p. 60. Dr. Richter connects several drawings with this journey. Amongst others, one, a sketch of a horseman, bears the inscription "Mess. Antonio Gri (mani), Veneziano, Chompagno d'Antonio Maria." This, according to the learned editor of Leonardo's MSS., was the famous Doge, defeated at Lepanto in 1499.

At this moment too, it may be, the artist made the two sketches (preserved at Windsor) of the equestrian statue of Colleone—a tribute of retrospective admiration to his old master, Verrocchio.

As to a certain Stefano Chigi, mentioned by Leonardo in connection with his stay at Venice, see a pamphlet by Sig. G. B. de Toni, "*Frammenti Vinciani, ii. Una Frase allusiva a Stefano Chigi*," Venice, 1897.

not escape the necessity of glorifying the Medici, the oppressors of his native land. The great point in connection with these involuntary sacrifices was to preserve some human respect, to avoid insulting the vanquished, after having extolled him to the skies. The stars of the golden age of the Renaissance, more careful of their own glory than many a modern artist, succeeded in reconciling the gratitude due to their former patrons with the consideration claimed by those of a later date.

In Leonardo's case, one would willingly discover, side by side with the thinker and the moralist, a generous heart, full of passionate interest in all the struggles that marked his period. But this would be a delusion. As M. Séailles has most truly pointed out,<sup>1</sup> he looked at political phenomena like a Spinoza: "sub specie æterni," from the eternal point of view. The evil wrought by others interests him less than the good he may do himself. Politics and social organisation, therefore, offered no attraction to the solitary speculator, accustomed to hover far above the level of the questions of the day. The multiplicity of the doubts which assailed him whenever he approached any particular problem, precluded him from being a man of action. It is only men of a narrow, or of a dishonest turn of mind, who have the gift of distinguishing, in complex matters, the one feature which makes most for their own advantage. But Leonardo, the very essence of scientific honesty and disinterestedness, believed he owed it as a duty to himself to exhaust every aspect of a phenomenon, instead of putting forward one side only, to the exclusion of all the rest. From this excess of indecision arose his contradictory behaviour, his weakness, and his compromises.

The foregoing statement was indispensable for the definition of the point of view from which we must judge a nature as rich as it was vacillating.

After his visit to Venice (March, 1500), Leonardo returned, like the prodigal son, to his native city. He took up his residence, for six months, in the house of his young disciple, the sculptor Giovanni Francesco Rustici. He had saved money during his stay at Milan; this is proved by the fact that he deposited 600 florins (somewhere about twelve hundred pounds) at the Hospice of "Santa Maria Nuova" in the month of January, 1500. On various occasions,

<sup>1</sup> *Leonardo da Vinci: L'Artiste et le Savant*, p. 501.

between April 24, 1500, and May 20, 1506, he drew out 450 florins of this sum.<sup>1</sup>

Sixteen or seventeen years had elapsed since Leonardo had left his native country: and during this interval both public and artistic prosperity had been sorely shaken. The wealthy bankers of former days were now replaced by bankrupt merchants. There was as much confusion in men's minds as in their financial affairs. In spite of the punishment inflicted on Savonarola, mysticism was still rife among the Florentines, and more particularly among the artists; this we know from the biographies of Botticelli, Lorenzo di Credo, Fra Bartolommeo, and the Della Robbia.

On April 14, 1500, the Government, in the transport of delight aroused by the capture of Lodovico il Moro, reared a beautiful crucifix before the entrance of the Palazzo Vecchio, as though to remind the city that she had chosen Christ to be her King. A few days later, the famous *Madonna dell' Impruneta* was carried in solemn procession through the streets.<sup>2</sup>

The most eminent of Da Vinci's artistic contemporaries, Verrocchio, Pollajuolo, Ghirlandajo, had passed away. Botticelli, aged and worn out, had, in a sense, outlived himself; Filippino Lippi, though in the prime of life, had not produced anything in advance of his earlier work. Others, such as Lorenzo di Credi and Piero di Cosimo (1462-1521)<sup>3</sup> were more than ready to enrol themselves under the banner of their fellow-citizen, who had returned from Milan after having founded a flourishing school there. The same may be said of Andrea del Sarto (1486-1531), who imitated his tender colour and the suavity of his types.

On the other hand, new men had come to the front. At their head was Michelangelo, already, and in spite of his youth (he was only twenty-five), accepted as the unquestioned leader of the Florentine school.

Perugino, who oscillated backward and forward perpetually between Perugia and Florence, had identified himself, for his part, with a style of art as remarkable for its mystic and devout expression as for the warmth and richness of its colour. Leonardo's former fellow-

<sup>1</sup> Uzielli, *Ricerche intorno a Leonardo da Vinci*, 1st ed., vol. i., p. 164-165; 2nd ed., vol. i., p. 609-610.

<sup>2</sup> See Landucci's *Diario*, del Badia edition, p. 208-209.

<sup>3</sup> Leonardo mentions the name of Piero di Cosimo without comment of any sort. (Richter, vol. ii., p. 437.)

disciple was at that moment the most popular and admired painter in Italy, and perhaps in Europe. Princes, republics, religious communities, vied with each other for the possession of the works he produced so profusely. The cities of Umbria, of the Romagna, Orvieto, Pavia, Venice, all, in their turn, approached him with the most flattering requests.

The most brilliant of all Perugino's pupils, Raphael, had not, as yet, left Umbria. We shall see that he had hardly settled at Florence before he revealed himself one of Leonardo's most ardent admirers.

As for Fra Bartolommeo, as soon as his *Last Judgment*, now preserved in the Museum of Santa Maria Nuova, was completed, overwhelmed by the tragic end of his master, Savonarola, he had laid aside his brush for a time, and was living in the deepest seclusion. Leonardo's return to Florence coincided with the return of the Frate to his artistic labours. The Dominican painter did not attempt to withstand the influence of so mighty a master. He was especially indebted to Leonardo in the matter of chiaroscuro and colour.<sup>1</sup>



PORTRAIT OF CÆSAR BORGIA.  
FROM AN ENGRAVING IN PAOLO GIOVIO'S "ELOGI."

Another artist who should be mentioned as having come within the sphere of Leonardo's influence is Ridolfo Ghirlandajo (1483-1561), the son of Domenico.

Leonardo had returned to Florence famous and admired. Did his country realise, at last, that in the case of a man of such genius, the current rate of production must be put aside; that perfection so great could only be attained by dint of infinite toil?

No man was ever less prone to improvisation; in those days of

<sup>1</sup> *Histoire de l'Art pendant la Renaissance*, vol. ii., p. 672

facile production, Da Vinci represented the very extreme of probity and scrupulous care. He alone—I am not afraid to say it roundly—might, by his sole example, have checked the already visible decline of the Florentine school. That respect for nature, and worship of form, which he professed, was the remedy—and the only efficacious one—for a degeneration of which all too many symptoms were apparent.

The Gonfaloniere Pietro Soderini was anxious to do something for the sorely-tried artist.

For a moment there was a question of confiding the famous block of marble out of which Michelangelo ultimately sculptured the David, to Leonardo's chisel (Michelangelo was given this commission in accordance with deliberations held July 2 and August 16, 1501); but the expiration of Soderini's period of power—he was not appointed Gonfaloniere for life, till September 22, 1502—paralysed the great official's well meant efforts.

Meanwhile, Leonardo painted his *Saint Anne*. In the month of April, 1501, he was working upon it eagerly, but he soon put it aside half finished, as he did with so many other pictures. In the following September, he was travelling about, in the character of military engineer to Cæsar Borgia.<sup>1</sup>

This was the first occasion, probably, on which Leonardo da Vinci was permitted to realise a long-cherished dream: that of giving practical evidence of his skill in the art of war.<sup>2</sup> For long this had been his supreme ambition. Had he not boasted in his famous letter to Lodovico il Moro that he would put all that prince's enemies to flight with machines none would be able to withstand? What think you, reader, of this painter, poet, man of science, who aspired to play the part of a man of war? As a matter of curiosity, I may note the presence, in the enemy's camp, of another famous engineer, who was also a very talented architect, Francesco di Giorgio Martini, of Siena. Leonardo had certainly enjoyed opportunities of meeting this eminent master at

<sup>1</sup> See Alvisi, *Cesare Borgia, Duca di Romagna*, p. 203. Imola, 1878.

<sup>2</sup> Leonardo's performances as a military engineer have been studied by C. Promis (*Trattato di Architettura civile e militare di Francesco di Giorgio Martini*, Turin, 1841; vol. iv., pp. 44-52, 203, etc.); by Angelucci, in his *Documenti inediti per la Storia delle Armi da fuoco italiane*, p. 92, Turin, 1869; and also by Herr Müller-Walde (*Leonardo da Vinci*, fasc. iii.).



XVI

*Cartoon of the Holy Family with S. Anne.*

(ROYAL ACADEMY, LONDON.)





Portrait of Georg Fugger von Aulendorf

P. 47



Milan, whither Francesco had been summoned to give advice as to the construction of the Duomo. I may add that Bramante, too, seems to have taken part in this campaign; and, to conclude, another gifted artist, the sculptor, Pietro Torrigiano, was serving as a soldier in the army of the Borgias.<sup>1</sup>

On August 18, 1502, the son of Alexander VI. sends Leonardo a patent intended to facilitate his inspections of the towns and fortresses so boldly snatched from their legitimate owner's hands. This document, dated from Pavia, where the usurper was at the moment, describes the master as architect and engineer-in-chief.<sup>2</sup>

Leonardo had not waited to receive it before beginning his tour. As early as July 30, we find him at Urbino, where he sketches a dovecote, a staircase of several flights, and the fortress itself; on August 1, he puts in an appearance at Pesaro, where he surveys several engines of war, and sketches the library; on the 8th, he stops at Rimini, and takes note of the harmonious sound of the water falling from the fountain. He pays a longer visit (from August 11 to 15) to Cesena, makes a drawing of a battlemented house, and describes a waggon, and the local system of vine planting; on September 6, he reaches Porto Cesenatico, and sketches the harbour there. In the course of these wanderings, he halts at Piombino, Acquapendente, near Orvieto, at Siena, where he notes the plan on which a bell is hung (probably that in the "Torre del Mangia," the belfry of the Palazzo Pubblico). Imola, Faenza, Forli, Bertinore, are visited in turn,

<sup>1</sup> Alvisi, *Cesare Borgia*, p. 126.

<sup>2</sup> Della Valle, Vasari's edition (Siena, 1792), vol. v., p. 72-73.—Amoretti, *Memorie*, p. 87.—Alvisi, *Cesare Borgia, Duca di Romagna*, p. 357-358. Here is a translation of this curious document:—"Cæsar Borgia of France . . . all our lieutenants, castellans, captains, condottieri, officers, soldiers, and subjects, who may have knowledge of these presents are ordered and commanded (as follows): To give free passage, without levying any public tax either on himself or his company, to grant friendly welcome, and freedom to take measurements, and make examination as he wills, to our most excellent and well-beloved friend, architect, and engineer-in-chief, Leonardo Vinci, bearer of these presents, commissioned by us to inspect all strong places and fortresses in our dominions, so that we may, according to their necessity and his counsel, provide for their maintenance. And to this end they are to provide him with as many men as he shall require, and give him all the help, support, and favour he may demand. It being our will that every engineer in our dominions shall be bound to confer with him, and follow his opinion, let no man dare to do otherwise, if he does not wish to incur our displeasure . . . Given at Pavia, August 18, 1502

by Cæsar Borgia's inspector-general. Perhaps he travelled as far as Buonconvento, Chiusi, Perugia, Santa Maria degli Angeli, and Foligno. One of his notes, at all events, mentions the distances between these various towns.<sup>1</sup> Everywhere he draws out plans, sketches fortresses, takes note of curiosities of every sort and kind.

It is asserted that Cæsar's engineer in ordinary advised his employer to destroy the fortifications of Castel Bolognese, and that, on the other hand, the barracks built at that place to accommodate troops were erected under his superintendence. The honour of having planned the canal intended to connect Cesena with Porto Cesenatico is also ascribed to him.

The one point absolutely certain is that, on most occasions, he mingled the performance of his military functions with other occupations of the most varied nature. Wherever he was, he played truant to some extent. A strange fancy this, surely, which led an eager and practical man, like Cæsar Borgia, to take this dreamer, this dilettante, this visionary into his service!

A letter to the Marchesa Isabella of Mantua, dated April, 1503, gives us some valuable details as to Leonardo's occupations at this moment.

"Most illustrious and most excellent Lady,—During this Holy Week I have learnt the intentions of Leonardo the painter from his pupil Salai, and from several other of his friends, who, to inform me yet more fully, conducted me to his house, on Wednesday in Holy Week. To sum it up, his mathematical studies have so drawn him away from painting that he cannot endure to use his brush. Nevertheless, I endeavoured, first of all, skilfully to plead your Excellency's cause. Then seeing him well inclined to please your Excellency, I spoke to him in all sincerity, and we came to the following conclusion: he can leave the service of the King of France without incurring his displeasure, and, as he hopes, within a month, at latest, he will place himself at your Excellency's orders, in preference to those of any other person. But in any case, no sooner shall he have finished a little picture he is now painting for one Robertet, the favourite of the King of France, than he will immediately execute the portrait and send it to your Excellency. I have left two good canvassers about him. The small picture on which he is working is a Madonna, seated,

<sup>1</sup> Richter, vol. ii. p. 243; Alvisi, p. 309-310.

disentangling her spindles, while the Child, with his foot on the basket containing the spindles, has laid hold of the winder, and gazes attentively at its four rays (branches) which form a cross, and, as though desiring to have the cross, he holds it firmly, though laughingly, and will not give it back to his Mother, who tries to take it from him. This is what I have succeeded in arranging with him . . . . Florence, April 4, 1502, Fra Pietro da Nuvolaria, vice-general of the Carmelites.<sup>1</sup>

Meanwhile, Leonardo had laid the first touches on one of his masterpieces, the *Saint Anne*.

"Leonardo," says Vasari, "having heard that the Servites had commissioned Filippino Lippi to paint the picture for the high altar of the 'Nunziata,' expressed his desire to receive an order for some similar work. Forthwith Filippino, like the kindly and courteous man he was, made over the commission to him. The brothers, to ensure Leon-



FIRST IDEA FOR THE "SAINT ANNE."  
(Accademia, Venice.)

ardo every possible facility, received him in their house, entertaining both himself and all his following (that following which stood him in the stead of family). For a long time the artist kept them waiting, and did nothing at all. At last he produced a cartoon, with the Madonna, S. Anne, and the Christ. Not only did this work," Vasari adds, "fill all the artists with admiration, but on its completion, a continuous procession of men and women, of old men and youths, who hastened to admire the masterpiece, filled the chamber in which it was exhibited, for two whole days; the whole town was in a hubbub; you might have fancied it was a procession on some solemn feast day. . . . The face of the Virgin" (I still quote Vasari) "shows all

<sup>1</sup> Calvi, *Leonardo da Vinci*, p. 97.

that simplicity, beauty, and grace which characterise the Mother of Christ, together with her modesty and humility, mixed with joy at the sight of the beautiful Child she holds so lovingly on her lap. Her eyes, too, rest kindly on the little S. John, playing with his lamb, while the smile of S. Anne expresses her deep joy at beholding the association of her terrestrial descendants with celestial glory : a kind of expression which, as is well known, was specially suited to Leonardo's talent. This cartoon, as will be shortly shown, was carried into France. Leonardo having relinquished the undertaking, the brothers once more confided it to Filippino, but death overtaking him, neither was he able to accomplish it." And further on : " Leonardo went to France, for the King,<sup>1</sup> who possessed some of his works, showed him great affection and expressed his desire to see the cartoon of *Saint Anne* carried out in colour ; but he, as was his wont, put him off, for a long time, with words."

The history of this masterpiece is exceedingly obscure.<sup>2</sup> For many years, the work now preserved in the Royal Academy in London was thought to be the Servite cartoon. But this differs in several points from Vasari's description. The little S. John the Baptist is not playing with a lamb ; he is advancing towards the Holy Child, as though to do Him homage, and the Child's right hand is raised to bless him. Further, it will be noticed that S. Anne points her finger heavenward, a gesture which would not have escaped Vasari's notice. The London cartoon is most certainly only the very earliest conception of the composition. It may be, indeed, that it was produced at a different period, and intended for some other picture. This would explain why only one artist, Bernardino Luini, thought of copying it (his picture is now preserved in the Ambrosiano at Milan), whereas the final cartoon gave birth to a

<sup>1</sup> Springer is inclined to think this means Louis XII., but there is no room for doubt that Vasari referred to Francis I.

<sup>2</sup> In a study published in the *Gazette des Beaux Arts* (1887, vol. ii., p. 98), M. A. Gruyer shows an inclination to believe that the *Saint Anne* was painted at Milan between 1507 and 1512, and thereby explains the numerous copies of it made by the best Lombard painters of that school. But may not Leonardo have brought the picture from Florence to Milan? See also Mr. Alfred Marks' exceedingly conscientious work, *The Santa Anna of Leonardo da Vinci*, London, 1882 ; Springer's article in the *Zeitschrift für bild. Kunst*, 1888 ; *L'Art*, July, 1888 ; Marks, *Magazine of Art*, April, 1893 ; *La Chronique d'Art*, Dec. 5, 1891 ; the London *Athenæum*, April 23, May 21, June 18, 1892 ; Cook, *Gazette des Beaux Arts*, Nov. 1897 ; Kiegel, *Beiträge zur Kunstgeschichte Italiens*, Dresden, 1898, p. 109, etc.



score of copies or imitations, which are all enumerated in Mr. Marks' article. It will be remarked that these copyists or imitators have all clung to the graceful fancy of making the Child Jesus embrace the lamb, an incident which does not occur in the Royal Academy cartoon.

Personally, I am inclined to believe that the painting in the Louvre is the cartoon executed for the Servites, and that there are several inaccuracies in the description of it left us by Vasari. One thing is certain, that all the sixteenth-century writers—Paolo Giovio, Signor Milanese's anonymous author, etc., speak of a *Saint Anne* purchased by Francis I.<sup>1</sup> And further, when the Cardinal d'Aragon paid a visit to Leonardo at the Château de Cloux in 1516, the artist showed him a picture of the "Madonna e del figliolo che stan posti in gremmo di Sancta Anna."<sup>2</sup> This, evidently, is the *Saint Anne* in the Louvre. A sonnet published in 1525, by a Bolognese, Geronimo Casio de' Medici, expressly mentions "S. Anna che dipinse L. Vinci, che tenea la Maria in braccio, che non volea il figlio scendessi sopra un agnello."<sup>3</sup>

Francis I. did not acquire the *Saint Anne*, as we learn on the testimony of the Cardinal d'Aragon, till after the month of October, 1516. Perhaps he purchased the picture directly from Leonardo; perhaps, again, he bought it from his legatee, Francesco Melzi.

It is true that the Louvre picture does differ in some particulars from the description given us by Vasari, but that description was very probably founded on hearsay. Vasari never went to Florence till 1528, and thus had no opportunity of studying the cartoon with his own eyes, for, as we shall shortly learn, it had left Italy long before that date. I will limit myself to the indication of a few of the divergencies. The biographer mentions, among the figures in the sacred idyll, the infant S. John the Baptist. Now there is no figure of S. John in the Louvre picture. Further, he tells us that the Child Jesus is seated on His Mother's lap. In the Louvre picture, the Child is sitting on the ground, and just about to bestride the lamb.

<sup>1</sup> Signor Milanese's anonymous writer says, "Fece una Nostra Donna e una Santa Anna che ando' in Francia."

<sup>2</sup> Uzielli, *Ricerche intorno a Leonardo da Vinci*, 1st edition, vol. ii., p. 460.

<sup>3</sup> It should be noted that Paolo Giovio speaks of a "tabula," and the Cardinal's secretary of a "quadro"; that is to say, in each case of a picture, a painting, and not at all of a cartoon. Now what does Vasari tell us? That the King of France pressed the artist to put the cartoon of *Saint Anne* into colour: "Che colorisse il cartone della Santa Anna," in other words, to transfer the grisaille drawing to panel and colour it.

Fortunately a valuable document, discovered in the Mantuan archives by Armand Baschet, and published by Charles Yriarte, has cast a flood of light upon this matter. The following words are quoted from M. Yriarte's elegant and faithful translation of a letter written to the Marchesa Isabella of Mantua by her correspondent Fra Pietro da Nuvolaria, and dated April 3, 1501. "I will apply all my care and haste to the commission, but, according to everything I hear, Leonardo's life is full of variety, and subject to many changes. He seems to be living without care for the morrow. He has only done one cartoon since he has been at Florence. His composition is an Infant Christ, hardly a year old, slipping from His Mother's clasp to catch hold of a lamb and embrace it. The Virgin, rising almost out of the lap of S. Anne, endeavours to part the Babe from the lamb—the animal must not be sacrificed; it represents the Passion of Christ. S. Anne seems about to make some movement to hold her daughter back. This may be an allusion to the Church, which would not seek to prevent the Lord's Passion. The figures are life-sized, and yet the composition is a small one, because, as all of them are either seated or bending down, they overlap each other on the left-hand side of the group. This sketch is not yet completed. He has done nothing else. Two of his pupils are painting portraits, and he touches them up from time to time. He grows very impatient of painting, and spends all his time on geometry. I write this merely to acknowledge the receipt of your letter. I will perform the commission and will advise your Excellency."<sup>1</sup>

This letter removes all doubt as to the identity of the composition selected for the picture in the Louvre with that produced by Leonardo in 1501. What is the description given by the Marchesa's correspondent? That Leonardo has represented the Infant Christ escaping from His Mother's arms, to lay hands on a lamb, that the Virgin rises, almost from her mother's lap, to part the Child from the lamb, and that S. Anne seems disposed to hold her daughter back. These features are applicable in every particular to the sketch in the Louvre, except that, in this latter, S. Anne, with hand on hip, quietly watches her grandson's play, instead of making any effort to prevent

<sup>1</sup> *Gazette des Beaux Arts*, 1888, vol. i., p. 123.





18

*Study for the Drapery of the Virgin in the "Saint  
Anne."*

(1884-1885 V. 16)



Printed by Draeger, Paris.



her daughter from restraining him. None of these features, on the other hand, are applicable to the Royal Academy cartoon; the lamb is entirely absent (its place is supplied by the figure of the little S. John the Baptist), and the scene, therefore, is quite different both in aspect and significance, to that described by Fra Pietro da Nuvolaria, who further gives us the date at which the composition was definitely decided upon, in Leonardo's mind: April, 1501.

In 1503, as we have already said, the Servites, despairing of the completion of the work by Leonardo, signed a fresh contract with Filippino Lippi, who promised to deliver the picture before Whitsuntide in the following year. But his death (April, 1504) prevented the redemption of this promise, and the altar-piece was furnished by Perugino,—his famous *Crucifixion*, now at the Accademia delle Belle Arti at Florence.

When Leonardo returned to Milan, to reside there, he naturally carried his cartoon—perhaps his two cartoons—with him. And this explains the frequent reproduction of his charming and wonderfully harmonious composition by the painters of Northern Italy.

Finally, the cartoon followed its author to France. Vasari bears formal witness to this fact. He is corroborated by Paolo Giovio, and by the writer of the anonymous biography edited by Signor Milanese. In his life of Leonardo, written about 1529, Paolo Giovio tells us, in explicit terms, that there was a picture representing the Infant Christ, playing with His Mother and S. Anne, and that this picture was bought by the King of France, and placed in his treasury: "Extat et infans Christus in tabula cum Matre Virgine Annaque una colludens, quam Franciscus Rex Galliæ coemptam in sacrario collocavit."

How then did the *Saint Anne* find its way out of the royal collection? The explanation is easily found. In the same way as Benvenuto Cellini's saltcellar, or the casket of Valerio Belli,<sup>1</sup> or the great Viennese cameo—the first of which was given by Charles IX., in 1570, to the Archduke Ferdinand of Austria, uncle of his betrothed wife, Elizabeth, while the second may have been carried into Austria by that same Elizabeth, after the death of Charles IX.—or again, without looking further afield, in the same way as Leonardo's *John the Baptist*, which was given to Charles I. of England by Louis XIII., purchased

<sup>1</sup> Plon, *Benvenuto Cellini*, p. 296.

by Jabach, when that monarch's belongings were dispersed, and bought back from Jabach by Mazarin.

I have grave doubts, in any case, as to whether it was the original *Saint Anne* which fell, as Lomazzo affirms, into the hands of Aurelio Luini, son of the painter, at Milan, towards the close of the sixteenth century. This was probably only a copy. It is certain that the original picture was found in Italy at the time of the siege of Casale, by Cardinal Richelieu, and by him brought back to France.<sup>1</sup>

How did the *Saint Anne* find its way back into the Royal collection? I find this question more difficult to answer. For a moment I believed that two entries of payments, contained in the accounts connected with the buildings of Louis XIV., referred to the masterpiece in the Salon Carré. The following lines appear in certain documents published by M. Guiffrey: "1677. Bought, a picture by Leonardo da Vinci. 4400 lb." "1678, January 8. To M. le Marquis de Béthune for a picture by Leonard de Vincy which he has sold to the King. 4400 lb." <sup>2</sup>

But in response to my appeal to M. Bonnaffé, the erudite and lively historian of Richelieu, I have received this learned pronouncement, which, with his kind permission, I will now proceed to lay before the public. "The *Saint Anne* by Leonardo, which the Cardinal brought back with him from Italy, in 1629, was hung in the 'Grand Cabinet' of his hôtel in Paris, together with *The Family of the Virgin* by Andrea del Sarto, the *Disciples at Emmaüs* by Paul Veronese, etc. In 1636, Richelieu presented this palace of his to the King. The gift was formally legalised in 1639. During the regency of Anne of Austria, the pictures were removed to Fontainebleau (Sauval, vol. ii., p. 169), and placed in the Queen's apartments. Subsequently (when, I know not), they were brought back to Paris, and hung in the Louvre. The picture bought from the Marquis de Béthune in 1678, cannot, therefore, have been the *Saint Anne* now in the Louvre."

M. Bonnaffé is quite right. A note communicated to me by M. Engerand, who has applied his wide learning to the reconstitution

<sup>1</sup> The inventory of the ducal palace at Turin (1682) mentions a cartoon "della Madonna in grembo a S. Anna, di Leonardo da Vinci." (Campori, *Raccolta di Cataloghi ed Inventarii inediti*, p. 98.)

<sup>2</sup> *Les Comptes des Bâtiments du Roi*, vol. i. p. 943—1012.

of the history of our great national gallery, proves that the picture purchased from the Marquis de Béthune was the *Virgin with the Scales*.

In addition to the Royal Academy cartoon, and the picture in the Louvre, I may mention a third cartoon, with fragmentary sketches of hands and feet, in her Majesty's library at Windsor.<sup>1</sup>

And at a yet more recent date, Mr. Marks has brought to light a cartoon which passed out of the collection of Padre Resta (1696) into that of the Platterberg family, at Münster, and finally into the hands of Count Nicolas Esterhazy, at Vienna. My knowledge of this specimen, which is remarkable for its wonderful finish, is confined to photographs.<sup>2</sup>

The idea, certainly singular, and even somewhat irreverent, of representing the Virgin seated on the knee of her mother, S. Anne, would seem to have been haunting Leonardo's fancy for a long time. Perhaps he reckoned on the increased strength of the impression to be produced by the contemplation of these two generations of maternity, this tenderness twice told, of S. Anne for the Virgin, and of the Virgin for her Son. However that may have been, the idea of this grown woman, already a mother herself, sitting on the lap of her own parent, is not altogether an agreeable one. There is something over-familiar about it, which startles and repels.<sup>3</sup>

A pen and ink drawing in the Accademia delle Belle Arti, at Venice (see above, p. 121), contains the germ of this composition, which is certainly more picturesque than solemn in conception. The Virgin, seated on S. Anne's lap, holds the Infant Jesus, who bends to bless the lamb which raises its head towards him. In the background there is a second figure, probably a study for the first two. The grouping is not definite, the arrangement of the lines is neither clear nor vigorous. With this Venetian drawing, I must refer to that in the British

<sup>1</sup> The writer of an article in the *Gazette des Beaux Arts* (November, 1897) contests the authenticity of these fragments, which he describes as "heavy and formless lumps of flesh." I appeal from him to the testimony of all art connoisseurs.

<sup>2</sup> In his article already referred to, in the *Gazette des Beaux Arts*, and in the *Catalogue of the Burlington Fine Arts Club* (1898, p. 35), Mr. Cook affirms that the Esterhazy cartoon is an imitation, and not by Leonardo's hand at all.

<sup>3</sup> Yet it is asserted that in the Middle Ages the Virgin used to be represented under the form of a child, sitting on her mother's lap, beside the Infant Jesus (Lübke, *Geschichte der italienischen Malerei*, vol. ii., p. 70). Michelangelo, too, represented the Virgin seated on the lap of St. Anne (Oxford University; Robinson, no. 22; and at the Louvre), as did also Girolamo dai Libri, in a picture in the National Gallery.

Museum. This last, which is engraved in Mr. Marks' works (p. 41), is connected with the Royal Academy cartoon, and is composed of four figures, almost in the same attitude as the latter.

In the second rank, we note a drawing in the Louvre, originally belonging to the His de la Salle collection, which has been described as follows by M. de Tausia. "No. 120. A Holy Family. The Blessed Virgin, seated on her mother's knees, holds the Infant Jesus in her arms. He turns to the right, and looks at S. Anne. Two columns, very slightly indicated, enframe the composition: although the subject is the same as that of the picture known as the *Saint Anne* in the Louvre Museum, there is an evident difference between the two compositions (in black chalk, worked over with the pen). Size, 160 millim. by 120 millim."—Feuchère Collection.<sup>1</sup>

The Royal Academy cartoon, which may be taken as the link between these preparatory studies and the Louvre picture, is as lacking in definition as the Venetian drawing. The two female heads are so close together as to produce, at first sight, the effect of a two-headed body. The figures, also, are too closely interlocked. In every particular, the absence of the dignity and clearness characteristic of the *Saint Anne* in the Louvre makes itself felt.

Let us also glance, before proceeding further, at a head in the Uffizi Gallery which has many points in common with the S. Anne of the cartoon (Braun, 931). There are the same somewhat soft and irregular outlines, the same high chin, the same irregular features and uncertain glance.

A number of studies of heads, hands, feet, and draperies, carried out either in black chalk or body-colour, give us an idea of the care taken by Leonardo to ensure all possible perfection in his picture. These studies have lost—I will not say the dryness—but the over-precision and minuteness of those made for the *Virgin of the Rocks*. Though still scrupulously careful, they are full of an unequalled delicacy and ease. Leonardo had left the period of struggle behind him, and had entered on the epoch of his triumphs. The long laborious travail which brought the *Last Supper* into existence had given him an incomparable sureness of hand and charm of style. The

<sup>1</sup> *Notice des dessins de la His de la Salle Collection, exposés au Louvre*, p. 89.





TO

*“Saint Anne, the Virgin, and the Infant Jesus.”*

(1888-1889)



Printed by Draeger, Paris.



seeker had disappeared. The finder had taken his place, as we see in such things as the fine drawing in black chalk at the Louvre, made for some of the lower draperies on the figure of the Virgin (this drapery is much more elaborately carried out than in the picture itself), and the red chalk drawing at Windsor, less advanced, and therefore more remote from the actual picture. It only shows the right leg of the Virgin, and a bare arm, stretched out towards the Child, who does not appear in the drawing (Grosvenor Gallery, no. 100). For other drawings of this period see the Catalogue at the end of this volume.

An admirable drawing in the Louvre of a woman, seen full face, with an eager countenance, great eyes almost starting from their sockets, and dishevelled hair, yet with an indescribable air of dignity and grandeur, might well be the first idea for the *Saint Anne*. The expression and attitude in the Louvre picture are totally different. But in an ancient copy preserved at the Uffizi, though it varies in many particulars, the analogy is still striking. As to another drawing in the Louvre of the head of S. Anne (Braun, no. 213), it may have been done from the picture, and not for it.

A charming red chalk drawing, preserved in the Condé Museum at Chantilly (see vol. i., p. 12; there is a replica in the Accademia at Venice), contains studies for the head, for an arm, a foot, and finally for the whole figure, of the Infant Christ. The general attitude is indeed the same as in the picture; but the presence of the lamb is not yet indicated. In one case the Child holds a thong, in another the hands are empty. Of the lamb itself there is no trace.<sup>1</sup> There is a bad copy of this drawing in the Ambrosiana at Milan (Gerli., pl. ix.).

Let us turn to the picture itself. Who does not know the famous canvas, one of the artist's masterpieces, one of the gems of our Salon Carré? Seated on a hillock, facing the spectator, her figure thrown back, her left arm leaning on her hip, her two bare feet planted squarely on the ground as though to steady herself, S. Anne, her face shining with happiness, an ineffable smile upon

<sup>1</sup> Each of these drawings shows the same subjects, that is to say, two full length figures of the Infant Jesus, a head, a foot, and an arm. But each also contains things lacking in the other. The drawing at the Accademia at Venice contains, on the left, a shoulder and part of a torso, and on the right a male torso, which do not exist in the Chantilly drawing. On the left side of this last, on the other hand, we find a study for the lower part of a child's body, which is not in the Venetian drawing.

her lips, contemplates the charming group formed by her daughter and her grandson. The Virgin, sitting on her mother's knee, but turned to the right, and seen in profile only, bends to take up her Son, who is playing with a lamb, and who—that age knows no pity!—seems to be tormenting the innocent creature somewhat. He has caught hold of one of its ears, and thrown one of his legs over its neck, as though desiring to ride upon it. The lamb, though seeming to recognise this as mere caressing sport, gently resists, while the Child, obedient to his mother's voice, turns round as if to say, "But I am not hurting it!"

Any attempt to describe the naturalness, the ease, the charm of this little idyll in written words, must be futile indeed. The correctness of the various expressions, and the grace of the movements, are as nothing beside the overflowing poetry of the whole picture. In every detail of the work the artist has achieved the wonderful feat of making us forget the skill of the painter in our admiration of the poet, who calls up the most smiling fancies before our eyes. No other artist has based composition of such apparent lightness and grace on so deep a groundwork of effort and research, and Leonardo's work, consequently, bears criticism better than that of any other master.

Leonardo endeavoured to reduce the result of his long continued personal study of painting to a system. But though his *Trattato della Pittura* had been ten times as judicious and profound as it is, the artist would never have produced such a masterpiece as the *Saint Anne*, unless he had himself possessed a special artistic instinct. The qualities which are least affected by didactic analysis and instruction are the most precious, after all.

Let us not forget that the *Saint Anne* (a sketch only, but what a sketch!) is a complete contrast to the *Virgin of the Rocks*. The extreme of close and careful execution in the last-named picture, carried as far as that of the most sincere of the Primitives, is balanced, in this later work, by an outburst of fancy and freedom. Leonardo's genius, so radiant in its essence, handles the subject over which it had so long been brooding with consummate ease. Not a trace of effort remains. He has acquired sufficient self-control, sufficient power of abstraction, to spare us

the sight of the gropings and struggles which have led up to his triumph ; the work seems to have sprung into complete existence in a flash, and we could not desire or conceive it different in any one particular.

The colouring of the *Saint Anne* is clear, tender, sunny, full of pinks and blues, and tender carnations. It foreshadows Luini, Sodoma, Andrea del Sarto. The Virgin wears a reddish dress, the sleeves of a shade approaching blue, and a bluish mantle. (Positive colours very seldom appear in Leonardo's pictures. Everything, in his case, is relative and subjective. He must have had a foreknowledge of the laws of Daltonism.)

The landscape is light and hazy. Towards the centre, on the right, stands a clump of trees (ashes ?) fuller and leafier than those of the primitive masters, but treated in quite as poetic a style. (Leonardo kept his youth so long !) They have the same smooth trunks, crowned by sparse, quivering foliage, showing the deep Italian sky beyond. My readers will, I am sure, be glad that I should place before them, in this connection, some remarks on Leonardo's landscape art, furnished by my friend M. Émile Michel, whose opinion carries double weight, as being that both of an artist and an art critic. "Like Mantegna," writes M. Michel, "Leonardo holds that even as a background to pictures, the mere reproduction of nature does not offer sufficient interest. He searches out strange features, and in one and the same work he will bring together, without much air of probability, such curiosities of picturesque scenery as seem to him likely to appeal to the spectator's curiosity.

"The weird landscape that stretches behind *La Gioconda* certainly does add to the mysterious fascination of that enigmatic figure. The treacherous country, with its jagged peaks and deep waters and winding passes, the leaden sky, the threatening elements, frame the siren's beauty in most expressive fashion.

"The same background of bare bluish peaks appears in the *Saint Anne*, overlooking a far more smiling landscape, with waters that spread in rushing cascades amongst the trees and brown spaces of earth. The strangeness of these backgrounds of Leonardo's is increased by the fact that the details of his foregrounds are, as a rule, faithfully taken from nature, and reproduced with the scrupulous care and skill

in which no artist has ever equalled him. In the *Saint Anne*, every pebble on the ground has been separately and minutely studied. In the *Virgin of the Rocks*, which displays, through the fantastic openings of the grotto in which the Virgin is placed, the same mountainous country, crowned with sharp bristling peaks, Leonardo has adorned the foreground of his picture with lovingly painted ferns, irises, cyclamens, and borage, springing out of the rocky crevices."

Raphael, who exhausted the whole series of groupings to which the representation of the Virgin and Child could possibly give birth, never ventured, but once, to attempt an arrangement which, though eminently suited to pictorial expression, was likely in some cases to offend the spectator's sense of propriety.

In the famous picture in the Madrid Museum, known as *La Perla*, he shows us the Virgin half resting on the lap of S. Anne, with one arm round her mother's neck. In the *Holy Family* in the Naples Museum (*The Virgin with the long Thigh*), S. Anne is seated beside her daughter, with her arm round the Virgin's neck. But this pose is a very natural one.

But Raphael borrowed more than this from the *Saint Anne*. In another *Holy Family*, in the Madrid Museum—an exquisite little picture dated 1506, or 1507—the Infant Jesus is copied almost exactly from Leonardo's picture.

By his triumphs, then, and by his errors, Leonardo, as we see, wielded the mightiest influence over his contemporaries, and amongst them, upon masters of such calibre as Raphael himself. Never, it may safely be said, was any man's artistic work more suggestive, for never was any such work founded on a more intimate communion with nature, the eternal source of all inspiration and all beauty.



STUDY OF A HORSE.  
(Windsor Library.)





20

*Study for the "Saint Anne" (?)*

(7.4E 10 V.1E.)



Printed by Draeger, Paris





SKETCH FOR ENGINES OF WAR.  
(Valton Collection, Paris.)

## CHAPTER V

THE "BATTLE OF ANGIARI"—THE RIVALRY BETWEEN LEONARDO AND MICHELANGELO.



SKETCH FOR ONE OF THE COMBATANTS  
IN THE 'BATTLE OF ANGIARI.'  
(Accademia, Venice.)

HAPPILY for Leonardo's fame, the fall of Cæsar Borgia forced him, for a space, to turn his sole attention to painting.

At the same time, a kind of reaction, on which the great master must be congratulated, drove him, whenever occasion offered, to claim his rights and perform his duties as a Florentine, and to interest himself, once more, in matters which concerned his native country.

Let me hasten to add that both as it affected public peace and artistic well-being, the domestic situation in Florence had altered and improved. On September 10, 1502, Piero Soderini, an upright and resolute, though, it may be, a somewhat narrow-minded man, was elected Gonfaloniere for life. In the following year, the deaths of Pope Alexander VI. and of Piero de' Medici (August 18 and December 28, 1503), followed by the downfall of Cæsar Borgia, delivered the city from her three most redoubtable enemies. The period, therefore, was one of comparative calm. The only cause for anxiety to the Florentine government was the long protracted siege of Pisa. This, indeed, dragged wearily on. The war against the

unhappy town, which had begun in 1496, did not end until 1509. My readers are aware that at that date, and after a heroic resistance which would seem to have permanently exhausted all her vitality, Pisa was forced to surrender, and submit once more to the most detested of her foes.

A series of significant actions on Leonardo's part proved his settled intention to claim his share alike in the burdens and the prerogatives of Florentine citizenship. He caused his name to be inscribed afresh in the roll of the guild of Florentine painters. He proceeded, with several other persons, to the camp of his fellow-citizens before Pisa, to advise as to the carrying on of the siege works (July 23, 1503).<sup>1</sup> A little later (January 25, 1504) we find him taking part in the deliberations of a commission, consisting of all the leading artists in Florence—Andrea della Robbia, Attavante, the gifted miniature painter, Il Cronaca, Filippino Lippi, Botticelli, the two San Galli, Sansovino, Perugino, Lorenzo di Credo. The duty of this commission was to select the site on which Michelangelo's marble statue of *David* was to be set up. Leonardo spoke after ten others, and supported the opinion of Giuliano da San Gallo, and several more, to the effect that the colossal figure should be placed under the Loggia of the Signory (the Loggia dei Lanzi), beneath the middle arch, to preserve it from the weather. It should be added that, in deference to the wish of Michelangelo himself, the statue was placed at the entrance to the Palazzo Vecchio, opposite the Loggia dei Lanzi, and there remained, as is well known, until 1875.<sup>2</sup>

A memento of this consultation has probably come down to us in a sketch in the Windsor Library, representing a standing figure, in the exact pose of the *David*, the right arm hanging down, and grasping a sling, the left raised breast high, the left leg thrown outward. The resemblance is a striking one, though the features differ. Michelangelo has represented a youth, Leonardo has depicted a man of fifty. Immediately below this sketch is another, so rubbed that it

<sup>1</sup> One proposal was to turn the course of the Arno; another was to cut a canal (Gaye, *Carteggio*, vol. ii. p. 62). At the Windsor Castle Library there is a large plan for the Fountain of Neptune, ordered from Leonardo for the square of the Palazzo Vecchio. It is believed that this plan suggested Ammanati's famous fountain. (*Cicerone*, 7th edition, p. 736.)

<sup>2</sup> Gaye, *Carteggio*, vol. ii. p. 460.

must be guessed at, rather than seen. It would appear to be a first attempt after Buonarroti's marble figure. Herr Müller-Walde, however, takes it to be a study for Leonardo's *Triumph of Neptune*. The confused outline to be detected under the first drawing does indeed seem to represent a sea-horse, but the general analogy with Michelangelo's *David* and the dissimilarity with Segni's *Neptune* are both too strongly marked to admit of my accepting the view put forward by the German savant.

During this period Leonardo's manner of existence—he lived at one time with the Servite Fathers, at another with his friend Rustici, the sculptor, and probably, too, at Santa Maria Novella, close to the chamber in which he was painting his cartoon—was of a comparatively simple kind. According to his account books, he only spent eighteen gold florins (about £36) on the whole of his housekeeping expenses, between June 29 and August 4, 1504. He kept his own purse, and was his own house steward. In the morning he gives a florin to his much-loved pupil Salai. He, after having purchased bread, wine, eggs, mushrooms, fruit, and bran, and paid the barber and the shoemaker, brings him back three *soldi*. (There were forty-eight to the florin.)<sup>1</sup>

A far cry this, indeed, from the lordly habits and Sybarite indulgence mentioned by Vasari—and a typical example of the characteristic sobriety of the Italian!

But the modest extent of his resources did not prevent Leonardo from serving his friends. On April 8, 1503, he lent four gold ducats to the celebrated miniature painter, Attavante.<sup>2</sup>

It is a pleasure to see the great artist going back to this quieter life, taking fresh root in the city which had sheltered his childish years, and steeping his soul once more in the strengthening waters of patriotism. He never had reason to regret it, as far as his art was concerned—for, whatever men may say, inspiration springs not from the brain only, but from the heart as well.

The circumstances under which his return had taken place could not, indeed, have failed to strengthen the mutual affection between the painter and his fellow-citizens. Leonardo's glory had gone before him to Florence; he had left the city as a young artist

<sup>1</sup> Richter, *The Literary Works of Leonardo da Vinci*, vol. ii. p. 458.

<sup>2</sup> *Ibid.*, p. 457.

of the most brilliant promise: he returned to it, the unquestioned leader of the Italian school; even such masters as Filippino Lippi hastened to do him obeisance, and to renounce the most flattering commissions in his favour. This was the happy condition of men's minds when Leonardo was called by the Florentine Government—then, as we have just seen, presided over by Piero Soderini—to take his share in the decoration of the Palazzo Vecchio.

Let me say one word here concerning the apartment destined to be enriched by this fresh masterpiece. It was the great Council Chamber, which had been rebuilt a few years previously—in 1497: the room which now contains Vasari's frescoes. Leonardo's fellow-citizens, desirous of possessing some production of his already famous brush, selected him to decorate the huge apartment, a very sanctuary of public liberty; and with an instinct worthy of that epoch of fervent patriotism, they commissioned him to picture one of the noblest feats of arms performed by their forefathers—the battle fought by the Florentines against Niccolò Piccinino, the famous general of Filippo Maria Visconti, Duke of Milan, in the year 1440, at Anghiari, between Arezzo and Borgo San-Sepolcro.

The earliest discussion as to the decoration of the Council Chamber took place during the autumn of 1503: on October 24, the Council commanded the mace-bearer to make over the keys of the Pope's Chamber at Sta. Maria Novella to Leonardo's keeping. Here the artist was to prepare his cartoon. About the same time, steps were taken for the restoration of the Council Chamber, in which a scaffolding was shortly erected for the painter's convenience.<sup>2</sup>

On May 4, 1504, there was a sitting of the Council, from the records of which we gather that Leonardo had already begun the cartoon, and received an instalment of thirty-five gold florins on account. We also learn that the artist was to have completed his work by the end of February, 1505; and the Council undertook to pay him fifteen florins a month (about £30 10s.) from April 20, 1504. If the artist had not finished his work by the end of February, 1505, he was bound to return all the money, and to make over his cartoon to the Signory. The execution of the paintings was to be the subject

<sup>1</sup> According to Vasari, Leonardo invented a very ingenious machine for the drawing of this cartoon. It rose up when it was compressed, and sank when it was drawn out.



of a special contract (here follow several uninteresting clauses). Then we have purchases of plaster, of Alexandrian ceruse, of paper (one ream and twenty-nine quires of royal folio), eighty-eight pounds of flour for pasting the said paper, and a bed sheet of three widths to edge it.<sup>1</sup>

"Competition" is a word which has often been used in the course of references to the famous struggle between those two giants of art, Leonardo and Michelangelo. The term, as a matter of fact, is quite inapplicable. "Competition" indicates a preference shown to one party, an elimination of the other. Nothing of the sort occurs in this case. Each rival receives his own separate order, each treats his separate subject, each has the certain hope of seeing his handiwork shine in perpetual glory in the chief hall of the ancient municipal Palace. The competition, if such there be, is purely platonic. The only object of either artist is to excel the other, and



A SKETCH BY LEONARDO OF MICHELANGELO'S "DAVID."  
(Windsor Library.)

win more general applause. It was in this fashion that, some twelve years later, Raphael and Sebastiano del Piombo produced, the first his *Transfiguration*, the second his *Raising of Lazarus*, before the rapt and admiring eyes of Rome. These tournaments of art—distinct in every particular from all competition in the modern sense of the term—were far more refined, because they gave room for more independence, and therefore for greater fancy. Such, for instance, were those opened for the completion of buildings, the cathedrals of Milan and Pavia, the Vatican Basilica, the façade of San Lorenzo

<sup>1</sup> Gaye, *Carteggio*, vol. ii., p. 88, 89.—*Giornale storico degli Archivi toscani*, vol. ii., p. 137-139.—Vasari, Milanese's edition, vol. iv., p. 43-44.

at Florence, or even for the execution of the gates of the Baptistery at Florence, ordered just a century earlier.

Contemporary witness, however, is all unanimous as to the hostility between Leonardo da Vinci and Michelangelo.

It may be that the opinion expressed by Leonardo on the occasion of the setting up of the *David* gave umbrage to the sculptor. One thing is certain, the younger rival looked askance at the older man's genius. The man who had openly declared Perugino to be a dullard, who had accused Raphael of plagiarism, and pronounced the work of one of his best friends, Baccio d'Agnolo, puerile, was not disposed to bow his head before an artistic talent which, though less spontaneous, and less calculated to impress the vulgar than his own, was in reality far deeper. Vasari tells, in a very confused fashion, a story on this subject, the sense of which, unless I am mistaken, is as follows: Leo X. had consulted Leonardo as to the completion of the façade of the church of San Lorenzo at Florence. Hearing this, Michelangelo, who had been commissioned to do the work, left Florence, with the approval of the Duke, Giuliano de' Medici. Leonardo, in his turn, filled with disgust, made up his mind to travel to France. (See vol. i., p. 156, the story of Michelangelo's impertinent attack on Leonardo.)

Before we actually study Leonardo's composition, let us try to follow up the history of the masterpiece, its vicissitudes, and its destruction, so greatly to be deplored.

This time, contrary to his usual habit, Leonardo proved that he could be punctual.

At the appointed time, in February, 1505, he had his scaffoldings erected, not in the Pope's Chamber in Santa Maria, but in the Council Hall of the Palazzo Vecchio.<sup>1</sup>

There are fresh entries of purchases of plaster, "gesso da murare," (destined, this time, for covering the wall,) and linseed oil; then of Greek pitch, ceruse, gold leaf, Venetian sponges (663 lbs. of plaster, 89 lbs. of Greek pitch, 223 lbs. of linseed oil), etc. At the same moment the auxiliaries, artists or craftsmen (the painter Raffaello d'Antonio di Biagio, who worked for a fortnight on the picture, Ferrando Spagnolo, another painter, Lorenzo di Marco, Leonardo's "garzone," Tommaso di Giovanni Masini, who ground the colours),

<sup>1</sup> Published by Springer. *Raffaël und Michelangelo*, 2nd edition, vol. i., p. 43.

rise up round the master. Everything promised to go smoothly. In August, 1505, there is a purchase of fifty-four "braccia" of canvas to cover the scaffolding, probably for the protection of the artists, then of nut-oil and ceruse and plaster, and last of all, wax to smear over the linen stretched in the window frames instead of glass. All at once the payments cease, although the work is still unfinished. What had caused so serious a check?

For some time already, Leonardo, with the characteristic weakness which so often hampered his work, had been allowing the chemist to get the better of the artist. He had read in Pliny, without thoroughly understanding it, a recipe for some special stucco used by the Roman painters. He had tried it for the first time for his painting in the Pope's Chamber, where he was then working. Having placed his picture against the wall, he lighted a large charcoal fire in front of it, the heat of which dried and hardened the substance on which he had worked. He endeavoured to employ the same preparation in the Council Hall itself, and as a matter of fact, the lower part, which the fire could reach, did dry and harden satisfactorily. But in the upper region, which the heat could not touch on account of the distance, the substance remained soft and ran.<sup>1</sup>

This was more than enough to put Leonardo out of heart, and, as in the case of the *Adoration of the Magi*, the equestrian statue of Francesco Sforza, and many another work, he left his masterpiece alone, and began to build fresh castles in the air.

At this moment he seems to have turned his eyes in more directions than one. Appearances all point to his having made a journey to Rome in 1505. In 1506 he went back to Milan, summoned thither, as early as the month of May, by Charles d'Amboise, who governed the duchy in the name of King Louis XII. Neither threats nor

<sup>1</sup> Vasari only tells us that he desired to paint in oils on the wall, but that he used so thick a substance, "per lo incollato del muro," that in a short time the colour began to run. Paolo Giovio, who edited, in 1527 or 1528, the dialogues published by Tiraboschi (*Storia della Letteratura italiana*, Milan edition, vol. vii., p. 2495), also says that Leonardo used oil (nut), "Manet etiam in Comitio Curiae Florentinae pugna atque victoria de Pisanis praeclare ad modum, sed infeliciter inchoata, vitio tectorii colores juglandino oleo intritos singulari contumacia respuentis. Cujus inexpectatae (injuria) justissimus dolor interrupto operi gratiae plurimum addidisse videtur."

See also M. Ch. Brun's interesting study, *Leonardo da Vinci* (in *Kunst und Künstler* by Dohme, p. 43).

entreaties could induce him to alter his resolve. The Gonfaloniere, Piero Soderini, used very harsh language concerning him. The artist, he wrote, had not behaved as he should have done towards the Florentine Republic; he had accepted a considerable sum of money, and had only made a small beginning on a very large piece of work. But Leonardo was a proud-hearted man. Every one of his actions bore witness to his generosity. (There is a story that when he went to the bank to draw the monthly sum given him by Soderini, the cashier offered him the money in bags filled with "quattrini" (farthings), but the artist refused to take them. "I am no farthing painter," he said.)



STUDY FOR ONE OF THE HORSEMEN  
IN THE "BATTLE OF ANGIARI."  
(Library of the Institut de France,  
MS. 2037.)

Hearing of Soderini's complaints, he got together, with his friends' assistance, the whole sum he had received, and brought it back to him. Soderini, however, refused to accept it. Thus the painter saved his honour as a man. But how are we to excuse the artist's treason to his art; his desertion from the battlefield, his abandonment of his imperfect work to all the chances fate might bring?

Let us say at once that the sketch on the walls of the Palazzo Vecchio was destined shortly to disappear. On April 13, 1513, the Council of the Florentine Republic gave orders to a carpenter to put up a balustrade to protect the figures painted by Leonardo in the great hall. Then there is silence as to the masterpiece, and no one knows how or when it perished.<sup>1</sup>

As Leonardo's cartoon was hardly more long-lived than his sketch, we are forced to be content with a few more or less fragmentary

<sup>1</sup> Gaye, *Carteggio*, vol. ii. p. 88-90. Landucci has left some interesting details which, up to the present, have escaped the attention of Leonardo's biographers, as to the damage done in the great Council Hall in 1512. "E in questo tempo, piacqui a questo governo nuovo di guastare la sala del Consiglio maggiore, cioè el legniamo e tante belle cose ch' erano fatte con tanta grande spesa, e tante belle spalliere; e murorono certe camerette per soldati, e fecione una entrata dal sale; la qual cosa dolse a tutto Firenze, non la mutazione dello stato, ma quella bella opera del legniamo di tanta spesa. Ed era di grande riputazione ed onore della città avere sì bella residenza. Quando veniva una ambasceria a visitare la Signoria, faceva stupire chi la vedeva, quando entravano in sì magna residenza e in sì grande cospetto di consiglio di' cittadini. Sia sempre a laude e gloria di Dio ogni cosa, e posto nella sua volontà." (*Diario fiorentino dal 1450 al 1516*, p. 333. Florence, 1883.)

copies. At these a rapid glance must be taken, so that by means of their scattered fragments we may endeavour to reconstitute the original composition.

Lorenzo Zacchia of Lucca was the first to reproduce the group of four men on horseback, in an engraving, inscribed "*Opus sumptum ex tabella Leonardi Vincii propria manu picta, a Laurentio Zacchia Lucensi ab eodem nunc excusum*" (1558).<sup>1</sup>

An unfinished picture preserved in the magazine of the Uffizi Gallery, which, though certainly never touched by Leonardo's hand,

was spoken of as early as 1635 as being his work, would seem to have formed the basis of Zacchia's engraving. After this, in chronological order, come the



SKETCH FOR THE "BATTLE OF ANGHIARI."

(Accademia, Venice.)

Rubens drawing acquired for the Louvre, and Edelinck's engraving, of which I shall speak presently.<sup>2</sup> A drawing representing three horsemen and three foot-soldiers existed during the eighteenth century in the Rucellai Palace at Florence; this drawing has been engraved several times,<sup>3</sup> notably in the *Etruria pittrice*, vol. i. p. 29.

Some forty years since, a lithograph<sup>4</sup> appeared, said to be "a facsimile of a drawing by Leonardo, in the collection of M. Bergeret, the historical painter." But Bergeret's reputation as an imitator is too well established to need further mention here, and his so-called drawing by Leonardo can only deserve notice in so far as

<sup>1</sup> Vasari, Milanesi's edition, vol. iv., p. 42.

<sup>2</sup> Robert Dumesnil, *Le Peintre-Graveur français*, vol. vii., no. 44, p. 203. The earliest editor of the *Trattato*, Du Fresne, mentions a picture owned in his time by Le Maire, an excellent painter of perspective, which was believed to have been the original of Edelinck's engraving. (Mariette's *Abecedario*, vol. iii. p. 166.)

<sup>3</sup> "Combattimento di soldati a cavallo, cavato da un antico disegno esistente in Casa Rucellai, copiata da un cartone di Leonardo da Vinci, che esisteva nel salone del Consiglio in Palazzo Vecchio, della grandezza del presente rame—Ant. Fedi fece ad acqua forte. Matteo Carboni termino a bulino" (vol. i., p. xxix.).

<sup>4</sup> Dr. Rigollot has already described this lithograph as an imposture, *Catalogue de l'Œuvre de Léonard da Vinci*, p. 64.

it is connected with more serious documents. According to M. Georges Duplessis, the learned Keeper of the Prints in the Louvre, the lithograph in question is a reproduction of an inferior picture which M. Duplessis saw in the London National Gallery in 1862. More recently, the much regretted Charles Timbal purchased an old painting representing the celebrated group of men on horseback, differing in some striking points from the Rubens drawing. This picture, which has been engraved by M. Haussoullier, adds some valuable details to those we have in the said drawing. In the first place, the types agree with those of Leonardo. In the second, it enables us to identify several of the studies in the Pesth Museum, to which we shall refer presently.

These indispensable preliminaries over, let us study Leonardo's work, as far as written documents and pictorial evidence enable us to reconstruct it.

A battle may be represented in two ways. The first necessitates looking at it from the strategic, the anecdotic, or the picturesque point of view (the tapestries representing the *History of the Conquest of Tunis*, the *Destruction of the Armada*; Vasari's paintings in the Palazzo Vecchio at Florence, of the battles fought and cities taken by Cosimo de' Medici). In this case all the undulations of the ground, the positions occupied by the various bodies of troops, and the numberless incidents of the fray, are made to appear. The second method—that of Raphael, of Salvator Rosa, of Le Brun, and Gros, and Meissonier—consists in sacrificing all unimportant details, and concentrating attention on a very few characteristic episodes, sometimes even on a single one. In this case, the selected subject generally implies honour ascribed to the general in command, who appears in the character of "deus ex machinâ" to decide the struggle. This plan, the only one worthy of a historical painter, allows the artist to substitute a small number of actors—who in their own persons sum up all the heat of warlike passion or the joy of triumph—for large impersonal masses.

Leonardo had but few models to guide him, and all were of too archaic a character to be of any real service. The first of these in chronological sequence were the battlepieces of Paolo Ucello, with their amusing and often comic details; armour-laden knights



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*Study for One of the Combatants in the "Battle of  
Anghiari."*

(WINDSOR LIBRARY.)





Printed by Dreyer, Paris.



falling one upon the other, lance in rest; others lying prone upon the earth; foot-soldiers struggling, horses plunging, and men-at-arms in the background, drawing their crossbows: the whole canvas full of movement, but without unity, and marred by that absence of pictorial sentiment and lack of taste peculiar to the artist, although the general effect has something very stirring about it. In the work of another member of the Tuscan School, Piero della Francesca (*Battle between Heraclius and Chosroës*), the incidents of the fray are closely observed and well reproduced. The Tartar soldier, who seizes by the hair the foeman falling on his knees before him, the horsemen thundering one against the other, the rearing chargers, are all evidently taken from life. But warmth, spirit, animation, are all lacking; the composition is cold. The artist never drops his cloak of impassive reserve, and, above all, the whole action of the scene is confused; there are no episodes that stand out and rivet attention. Exactness in every particular, but no passion. Naturalness, but not a symptom of eloquence. And then, how stiff are the figures, how devoid of freedom or suppleness of gesture! The distinguishing feature of Leonardo's work as compared with that of his forerunners is, as we shall see, the clearness of his incidents, the exuberance of his dramatic feeling.

How did Leonardo solve this problem?

In one of his manuscripts, the master has left us a description of the Battle of Anghiari, as he had read it in some chronicle, or, perhaps, as he had gathered it from the lips of one of the last survivors of the famous struggle. "Let us begin," he writes, "with the speech of Niccolò Piccinino to the soldiers and the Florentine exiles, amongst whom were Messire Rinaldo degli Albizzi, and other Florentine citizens. After that, he must be represented mounting his horse, fully armed, with his army following him—forty squadrons of cavalry and 2,000 foot-soldiers went with him. The Patriarch<sup>1</sup> climbed up a mountain, early in the morning, to examine the country; that is to say the hills, the fields, and the valley watered by the river. He perceived Niccolò Piccinino in a cloud of dust, coming with his troops from Borgo San Sepolcro; having seen him, he returned to the camp and addressed his own men. When

<sup>1</sup> Cardinal Scarampi, Patriarch of Aquila.

he had finished his speech, he put his hands together and prayed; and immediately S. Peter was seen to appear out of a cloud and speak to the Patriarch, who sent five hundred horsemen to break or check the enemy's onslaught. Francesco, son of Niccolò Piccinino, came first to attack the bridge held by the Patriarch and the Florentines. Beyond the bridge, on the left, he sent foot-soldiers to prevent ours (from advancing); these repulsed him. Their leader was Michelotto, to whom the duty of keeping the army had fallen that day. Round this bridge a great struggle was waged. Our



SKETCH BY RAPHAEL FROM THE "BATTLE OF ANGIARI."  
(University of Oxford.)

side won, and the enemy was driven back. Then it was that Guidone, and his brother Astorre, Lord of Faënza, with a great following, formed in array again, and recommenced the fight, pressing the Florentines so vigorously that they took the bridge, and got as far as the tents. But Simonetto, with six hundred cavalry, fell on

the enemy, drove them out of the position again, and recovered the bridge. After him came up more troops, and 2,000 horsemen. Thus for a long time the struggle went on with changing results. At last the Patriarch, to carry confusion into the enemy's ranks, sent Niccolò da Pisa, etc."

This description is worth mentioning, but not worth quoting in its entirety, for none of the episodes he refers to found favour in Leonardo's eyes, while, on the other hand, that which he portrayed, the capture of the standard, is passed over in silence.

Machiavelli, less prolix and more incisive, has left a very characteristic account of the struggle to which the patriotism of his fellow-citizens had given undue importance. He declares that only one man lost his life in the battle, and that he was trampled under the horses' feet!

On the other hand, and this fact is an exceedingly curious one,

Leonardo has left us a manuscript account of a battle as he conceived it, and this description is the very opposite of his rendering of the Battle of Anghiari.<sup>1</sup> "First of all," says Leonardo, "the smoke of the artillery must be rendered, mingled in the air with the dust thrown up by the cavalry and the combatants." (Here follows a long dissertation on the mixture of these impalpable substances.) "The air must seem full of streaks of fire like lightning flashes; some of these flashes caused by the burning gunpowder must run upwards, some must fall downwards, some must fly horizontally, and the bullets from the fire-arms must leave a trail of smoke behind them.

You must show the victors running, with wild hair tossed, like their draperies, by the wind, with wrinkled faces, and swollen knitted brows. Their limbs must work in contrast, that is to say, if the right foot is in front, the left arm



EPISODE IN THE "BATTLE OF ANGHIARI."

(Windsor Library.)

must be the foremost of the two, and if you represent a fallen man, attention must be drawn to him by the marks on the blood-stained soil, while all around him, on the sodden ground, there must be the foot-marks of the men and horses who have passed him by. You must also show some horses each dragging his dead master's corpse along, and cruelly mangling his body, which hangs from the stirrups, and covers the path it has travelled with marks of blood. The vanquished party, put to rout, must have pale faces, arched, astonished eyebrows, wrinkled foreheads, nostrils drawn up into a bow, making a crease from the point of the nose up to the eye; their mouths gaping and the lips drawn back, the teeth exposed, and parting as though to shout the louder. Let one man, wounded and fallen on the ground, hold one hand over his terrified eyes, the palm turned toward the foe, while he leans on the other as though to raise himself. Others must be in full

<sup>1</sup> *Trattato della Pittura*, translated by Gault de St. Germain, cap. lxvii. Cf. Richter, *The Literary Works of Leonardo da Vinci*, vol. i., p. 301-303; and Ludwig, *Das Buch der Malerei*, cap. 148.

flight, and yelling as they go. The battle-field must be strewn, under the feet of the combatants, with arms of every kind, shields, spears, broken swords, and such like. Amongst the dead, some must be half hidden under dust and broken weapons, others again quite covered and half buried; the dust and soil, sodden with blood, will form a crimson mire; streams of blood issuing from the corpses, must run through the dust. Some dying men must be shown grinding their teeth, rolling their eyes, clenching their fists, and in various contortions of the body, legs, and arms. One supposed to have been overthrown and disarmed might defend himself still, with teeth and nails. A riderless horse may be represented, tearing through the enemy, his mane and tail flying in the wind, kicking and plunging, and throwing them into great confusion. Some poor maimed wretch may be seen falling to the earth, and sheltering himself beneath his shield, while his foe bends over him, and strives to slay him. There might also be a group of men lying heaped under a dead horse; and some of the victors, escaping out of the thick of the fight, might wipe themselves with their hands, their eyes blinded by the dust, and their cheeks befouled and smeared with the dirt of their own sweat, and of the water the dust has caused to run from their eyes. There will be the squadrons coming up to render aid, full of hope mingled with caution, with eyebrows raised, and shading their eyes with their hands, so as to discern the enemy in the fray or athwart the dust, and attentively obey their captain's orders; and the captain himself, baton in hand, galloping and pointing to the spot to be reached. Some river may be put in, with men on horseback in it, making the water fly up as they ride along, and whitening their whole road with foam: nothing must appear all over the field, but what is full of blood and horrid carnage."

Judging partly by the programme he thus assigns to the battle-painter, and partly by the care with which he collected minute information concerning the *Battle of Anghiari*, Leonardo should have treated the scene in an essentially realistic fashion: topography, strategic movements, correctness of costume, in a word, local colour, should have taken the foremost place in his conception. But nobody who understood the artist's profoundly idealistic nature would attribute such a plan to him! He is willing enough to make the most minute investigations before he begins his labour, but the moment his brush

is in his fingers he must recover all his liberty of action. These preliminary researches, of which scarce a trace is discernible in his ultimate production, have only one value in his eyes—that of preventing his imagination from going astray; they provide him, in a certain sense, with ballast. And all the time his idea takes stronger hold on his mind, throws out deeper roots, ripens yet more and more. At last, when the final moment comes, the artist rebels against the theorist, and face to face with a fresh subject, he claims a perfect independence.

No one looking at it from this point of view can hold Leonardo's mighty labour of assimilation and preparation to have been wasted.

The sketches which led up to the final cartoon<sup>1</sup> prove how slowly the composition shaped itself in the master's mind. These gropings of his should not surprise us, for no man worked with less ease than Leonardo, none found it more difficult to formulate what I will call a literary idea. A whole series of drawings show us isolated motives, very few of which found their way, even with modifications, into the cartoon. At Windsor we notice a knight and a foot-soldier rushing upon one or two men on foot who face them, bending down.<sup>2</sup>

A hastier and less definite sketch, also preserved at Windsor, shows us two figures, one pursuing the other. In the foreground a man brandishes a battle-axe, while two men and a horse lie stretched upon the ground. In a charcoal drawing in the same collection, in which the outlines are scarcely discernible, we catch a glimpse of the idea which was to be the foundation of the ultimate composition—two horses dashing one against the other, crushing each other's breasts, striving to tear each other. This idea is more clearly shown in a drawing in the British Museum—horsemen charging desperately, one horse biting the neck of another. Then the idea of single combats is succeeded by that of a general mêlée. A drawing

<sup>1</sup> In the *Gazette des Beaux Arts* (vol. xii., p. 302-304) and the *Collection d'Objets d'Art de M. Thiers, léguée au Musée du Louvre* (Paris, 1884, p. 112), Charles Blanc has published a sort of first idea for the *Battle of Anghiari*, a drawing from M. Thiers's collection, now in the Louvre, in which a horseman rides full gallop with his spear aimed at a foot-soldier, also armed with a spear. To my mind this work is one later, by eight or ten years, than Leonardo's time, and more closely connected with Michelangelo than with his rival. M. de Geymüller, in his *Derniers Travaux de Leonardo da Vinci*, ascribes it to Bramante. Morelli calls it a clumsy forgery (*Die Galerie Borghese*, p. 89).

<sup>2</sup> Richter, pl. xxi.



in the Accademia delle Belle Arti at Venice is a tangled whirl of horse and foot-soldiers, in which the eye at first sight is fairly puzzled to distinguish the artist's meaning.<sup>1</sup>

In another drawing, also at Venice, we see how ardently the artist has worked upon the central group, giving extraordinary vigour to the actors and splendid rhythm to the lines. Here foot-soldiers, in the most varied, and, it must be added, the most violent attitudes,



THE "BATTLE OF ANGIARI," AFTER THE DRAWING BY RUBENS.

brandish axes and lances at each other. This sketch proves that Leonardo's idea of representing a cavalry fight, so as to crush Michelangelo by his superior knowledge of equine anatomy, was not that which originally occurred to him. A third drawing at Venice represents a less closely packed, and for this reason, perhaps, a more picturesque conflict than its two predecessors. In this case horsemen are mingled with infantry soldiers.

At last, in two drawings in the Pesth Museum,<sup>2</sup> we see the artist

<sup>1</sup> Richter, pl. xxi., xxviii., lii., liv., lvi.

<sup>2</sup> Richter, vol. i. p. 338—339. Fol. i. verso, of the Trivulzio MS. has a head in profile (turned to the left), with a long peaked chin, which bears a strong resemblance to one of the combatants in the *Battle of Angiari*.



turning his attention to studies in detail, for separate figures. We see him endeavouring to fix the physiognomy of two of the horsemen who appear in the cartoon: the turbaned rider, waving his sword (a study for this figure exists in the Venetian Accademia), and the other, with a helmet adorned with a dragon, who breaks off the staff of the banner. Both these figures are of a full-blooded, almost sensual type. The third study, that of a young beardless man, seen in profile, opening his mouth to shout, appears in the picture formerly in the Timbal collection (on the right). He may also be recognised in



THE BATHERS: AN EPISODE IN THE WAR WITH PISA, BY MICHELANGELO.  
(From an old copy at Holkham House)

a red chalk drawing in the Windsor Library, in which three-quarters of the figure are shown.<sup>1</sup> Dr. Richter has connected this figure with a somewhat clumsy drawing in the *Codex Atlanticus* (*Saggio*, pl. xxii.). A drawing in the British Museum (Braun, no. 293) of a young man

<sup>1</sup> *The Royal Collection of Drawings by the Old Masters at Windsor. Drawings by Leonardo da Vinci*; London, Grosvenor Gallery, 1878, no. 87. See a similar figure in another of the Windsor drawings, published by Herr Müller-Walde, fig. 12. A drawing in the Ambrosiana Library, bearing a few words in Leonardo's hand, shows us a study for a profile head of a man shouting. The drawing in the Turin Library (no. 4) may possibly be connected with the *Battle of Anghiari*. A red chalk drawing in the Louvre (Braun, 195), of a man three quarters to the left, seems to me to belong to the *Battle of Anghiari*. I may say the same of another in the same collection, of two naked men struggling on the ground (Braun, 196). It must be connected with some preliminary study by the master, though it is too weak and rounded to be actually by his hand. A red chalk drawing in the Accademia, Venice, of a sour-looking old man (Naya, 212), attributed to Michelangelo, I take to be rather a study inspired by the *Battle of Anghiari*.

in a helmet, seen in profile, looking to the left, seems to me to be a study of the same head as that in the Pesth drawing.

A study in MS. K (pl. xiv.), of the Institut de France, represents a man on horseback, with a loosely flying mantle, bending to the left. This subject had long been in Leonardo's mind. He may perhaps, like a careful housekeeper, have kept it by him, to be used when occasion served. We do, indeed, find another horseman, with a fluttering cloak, bending to the right from a rearing charger, in a drawing in MS. B at the Institut (folio 46, v<sup>o</sup>). Gerli has also published (pl. vii.) a horseman in a flying mantle, rushing upon a foot-soldier, and (pl. xii.) two naked riders, their only covering a cloak that waves in the wind.

These sketches, various as they are, leave us without any satisfactory solution of a problem which more than one of my readers will be disposed to propound. Did the cartoon of the *Battle of Anghiari* only comprise the group of soldiers struggling round the banner? or did this group represent a mere episode in a far larger composition? Vasari contents himself with describing the capture of the standard, without reference to any other figures. Benvenuto Cellini is no more explicit. "Il mirabile Lionardo da Vinci aveva preso per elezione di mostrare una battaglia di cavalli concerta presura di bandiere, tanto divinamente fatti quanto immaginar si possa."

All these sketches point to multiple action. Yet, in all the ancient copies which have been preserved, only one episode appears: the struggle for the possession of the standard. Did the cartoon contain no episode save this? Or did Leonardo throw all the other incidents of the battle into the background of his picture? Dr. Richter is inclined to think that the greater number of the above-mentioned drawings, as well as several others by Raphael, reproduce various parts of the cartoon, of which the well-known group was a mere fragment. According to this learned authority,<sup>1</sup> whose opinion is accepted by Geymüller, the cavalry front which advances so proudly to the fray, with banners waving, figured on the extreme right of the cartoon. This opinion is founded on the fact that the horse seen from behind, which appears on the extreme right in Raphael's sketch,

<sup>1</sup> *Leonardo da Vinci*, vol. ii., p. 337-338. *Les derniers Travaux sur Leonardo da Vinci*, p. 39-40.

reappears in exactly the same form near the extreme left of a sketch by Leonardo, wrongly ascribed to Cesare da Sesto (p. 145), which reproduces another portion of the cartoon. This horse<sup>1</sup> is taken to be the figure which connected the group of horsemen fighting for the standard with the right side of the composition.

In this celebrated group Leonardo has rendered, with unspeakable skill, all the fury and despair and desperate effort of which the animal frame is capable, its grinding teeth, its yelling throat. We are not standing before a picture, we are in the thick of the fight. Even on the very ground, and under the horses' feet, the struggle goes on fiercely. One soldier, brought to his knees, may think only of how to shelter himself behind his buckler from the horse that rears above him; but close beside him two men clinging to each other are engaged in the most deadly strife.

At a first glance the dresses and armour may appear fantastic—the cuirasses with ram's heads in the centre and ram's horns on the shoulders; the helmets adorned with dragons. The turbans and curved swords that look like Turkish scimitars, seem more suited to some imaginary army than to real "condottieri." Yet a mass of contemporary testimony shows us that the Italians of Leonardo's time did load themselves with such extravagant adornments. It was a caprice characteristic of the men of the Renaissance. Art, they decreed, was to spread its influence even over sciences which seemed to be the negation of all art. The military engineer, the armourer, the very cannon-founder, were looked on as varieties of the artist.

The central group of four horsemen is incomparable in its vigour and fury. Two Florentine centaurs have succeeded in laying hold of the end of the staff of the Milanese standard; one of them has even contrived to break it in half, and is grasping the portion to which the banner itself is affixed. While one assailant uses both hands to hold the precious spoil, his comrade brandishes his sword, to keep back a turbaned Milanese, who is rushing to the standard-bearer's assistance. The standard-bearer himself is in

<sup>1</sup> A horse, identical at all points, appears in a drawing published by Gerli (pl. xxviii.), and reproduced in the *Gazette des Beaux Arts* (first period, vol. xxx., p. 147). But it is well known that Gerli's plates are frequently made up of details taken here and there from Leonardo's works.

a very awkward position. His foes, in their efforts to snatch the flag, have brought the pole right behind his back and under his arm; thus he cannot turn to face them, and his resistance is reduced to desperate contortions, one hand clutching the end of the staff, the other thrown behind him. Meanwhile the horses neigh and rear, tearing at each other with their teeth.

The two cartoons of the *Battle of Anghiari* and the *Pisan War* embody the different temperaments of Leonardo da Vinci and Michelangelo. In Leonardo's work, knowledge, subtlety, distinction, pervade the whole, without weakening the magnificent dash of the composition. Michelangelo's cartoon may be lacking in that science of picturesque grouping, which he never attained at any time. But how eloquent are his athletic forms, how noble his attitudes! How clear, living, dramatic, powerful even to brutality, the whole picture is! The generous passion of liberty, the noble audacity of the old Republic, shone for the last time in this cartoon of Buonarroti's.

And this was the last, too, of those grand contests, so appropriate to the spirit of Florentine democracy, immortalised by Brunellesco, Ghiberti, Donatello, Della Robbia, and many another. Florence, on the eve of losing her freedom, could not have desired a more brilliant *finale* than this epic struggle between the two greatest of her sons, Michelangelo and Leonardo.



HEAD OF AN OLD MAN.  
(Bonnat Collection, Paris.)



SKETCH OF HORSES AND HORSEMEN.  
(Royal Library, Turin.)

## CHAPTER VI

THE "MONA LISA" AND LEONARDO'S FEMALE PORTRAITS—THE "NEPTUNE"—THE  
"LEDA"—DEPARTURE FROM FLORENCE.



DESIGN FOR A  
FOUNTAIN.  
(Windsor Library.)

Le temps efface l'art avec un doigt trop prompt,  
Et l'Eternité manque à la force divine.  
Le Vinci sous son crêpe à peine se devine  
Et de Mona Lisa l'ombre envahit le front.

(THÉOPHILE GAUTIER.)

RELIGIOUS and historical art—the *Saint Anne* and the *Battle of Anghiari*—had not so absorbed Leonardo as to leave him no time for less serious work :<sup>1</sup> there is a pendant to these two master-pieces—the most marvellous of all portraits, antique or modern, the glory of the Louvre—the *Mona Lisa*.

Poets and novelists, historians and æsthetic students, have all done honour to the prodigies of execution apparent in the *Gioconda*, and built up a series of the most ingenious hypotheses as to the character of the original. But none of them have ever attempted to tear aside the veil that conceals a personality which must assuredly have possessed a sovereign attraction, nor searched bygone archives for any enlightenment as to the life and surroundings of Mona Lisa Gioconda.

At the first blush, such an enquiry would seem to promise but little interest. The "raison d'être" of *La Gioconda* is the genius of Leonardo da Vinci. But for him, the name of this obscure Florentine

<sup>1</sup> As early as 1501, Fra Pietro da Nuvolaria reports in one of his letters to the Marchesa Isabella d'Este, that two of Leonardo's pupils were painting portraits, which he occasionally touched up. What they were is unknown.

patrician would never have fallen upon our ears, nor would her image have haunted our imaginations. Nevertheless, I have held it my duty, as a historian, to attack this problem, and to add some details, still very far from complete, to the biography of Leonardo's heroine.

The Giocondo family was one of the most important in Florence. Lisa's husband, Francesco di Bartolommeo di Zanobi del Giocondo (born 1460, died 1528), filled several important public offices: in 1499 he was one of the twelve "Buonomini," in 1512 he was one of the "Priori," and was confirmed in the office in 1524.

The Giocondo race loved art and artists. Francesco commissioned D. Puligo to paint him a *St. Francis receiving the Stigmata*. His son caused Antonio di Donnino Mazzieri to paint a *History of the Martyrs*, intended for the chapel in the Annunziata, which contained the family burying-place. Another member of the family, Leonardo, bought a *Madonna* from Andrea del Sarto.

When (in the year 1495) Francesco took to wife Mona (the abbreviation of Madonna) Lisa, he had already, within the space of four years, seen two wives depart to a better world. He had married Camilla di Mariotto Ruccellai in 1491, and Tommasa di Mariotto Villani in 1493. His third wife was of Neapolitan origin; she belonged to the Gherardini family, possibly a branch of the Florentine stock bearing the same name. To these facts, unfortunately, the information I have been able to collect as to this first phase of her existence is limited. The enquiries kindly instituted at my request by Signor Barone, archivist of the Neapolitan state archives, have borne no fruit. In all probability, the child which died in 1499, and was buried at Sta. Maria Novella, was the issue of this third marriage, and consequently Lisa's daughter.<sup>1</sup>

As for Bartolommeo del Giocondo, to whom we have just referred in connection with a picture by Mazzieri, it is not known whether he was the son of Mona Lisa, or of one of Francesco's two former

<sup>1</sup> "Il 1° giugno 1499. Una fanciulla di Francesco del Giocondo, riposta in Sta. Maria Novella" (Libro dei Morti. State archives, Florence. Communicated by Signor Al. Carli). Between 1490 and 1545 were buried in the same church, Zanobi di Domenico, Piero di Bartolommeo, a daughter of Amadeo's, Antonio di Zanobi, two sons of Zanobi's, Maddalena di Amadeo, Lorenzo, Fiammetta, wife of Amadeo, Elisabetta, one of Jacopo's wives, Andrea d'Antonio, and Raffaello.



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*Principles of Moral Education*





Printed by Draeger, Paris.



wives. On the supposition that Mona Lisa was twenty when she married, she may have been near thirty when her portrait was painted. From that time onward she disappears into obscurity.

This picture of Mona Lisa has its story; we might almost say, its legend. Vasari relates that while Leonardo worked upon it, he was careful to surround his sitter with musicians, singers, and buffoons, who kept her in a state of gentle merriment, so as to avoid the look of melancholy apparent in most portraits. And thus, Vasari tells us, "this portrait of Leonardo's wears so delightful a smile that the work looks more divine than human, and is considered a most marvellous and life-like thing, even when compared with Nature herself."

There are but few studies for *La Gioconda*, and—as if the artist had resolved to puzzle us—the chief of these, a red chalk drawing in the Windsor Library, of two hands, laid one upon the other, and another single hand, is strangely unlike the work itself. Its angular forms are in complete contrast to the delicate modelling of the actual picture. The fingers are bony and the nails square.

One is tempted, on the other hand, to see a preparatory study for *La Gioconda* in the half-length portrait of a nude woman, in the Condé Museum at Chantilly. It is quite certain that this cartoon marks the transition between the *Mona Lisa* and the *Bacchus*.

Any attempt to analyse a marvel which is in every memory, and describe a portrait which excels all others in beauty and in fame, must seem superfluous.

My readers are well aware that for nearly four centuries Mona Lisa Gioconda has been an indecipherable and fascinating enigma to all the admirers who have crowded about her. "Never did any other artist (I borrow the words of the delicate writer who conceals his identity under the pseudonym Pierre de Corlay) so reproduce the very essence of woman. There is tenderness, and there is coquetry; there is modesty, and there is hidden passion; all the mystery of a heart that is itself in reserve; of a brain that reflects; of a person who guards her own individuality, and only sheds its radiance on others! Mona Lisa is thirty. Her charms have blossomed out. Her serene beauty, the reflection of her strong cheerful nature, is chaste and tempting at once. Kind, with a spice of malice; proud, but with a touch of wise condescension to her admirers. Freely and

boldly, sure of herself and of her power, she shows them her forehead, the temples throbbing with eager thought ; her eyes, that sparkle with subtle raillery ; her delicately curved lips, with their scornful and voluptuous smile ; the firm outline of her bosom ; the exquisite oval of her face, her patrician hands lying restfully before her. She shows them her whole self, in fact. And yet . . . she gives them nothing. The source of her thoughts, the deep reason of her smile, the spark which has put that strange light in her eyes, are all mysteriously hidden. That is her secret !—the impenetrable secret of her mighty attraction. Time has touched the masterpiece with his magic hand, and the violet atmosphere which seems to bathe the great artist's matchless model adds an indescribable fascination to the picture."

Let me add a note or two more. Leonardo's heroine has full, almost puffy cheeks and heavy eyelids ; on her mouth is that indefinable smile which every art-lover knows. The eyebrows and lashes are lacking, owing, no doubt, to some bygone restoration. Faint traces of them, and of the shadow they cast on the cheek, are still discernible through a magnifying glass. One detail which has been overlooked is that the portrait is enframed by two beautiful painted columns ; these are hidden by the frame, but they are distinctly visible in the (unfinished) engraving by François Gaillard, and in several old copies. Their presence is a further proof of the artist's worship of the antique.

The chief characteristic of the execution is the care for relief ; certain parts, as the hands, for instance, with their matchless modelling, are quite deceptive. They would almost be classed as a deliberate essay in illusion, if the touch were less broad and flexible.

What knowledge, what calculation is involved ! None but the mightiest genius, such as a Phidias or a Leonardo, could have evolved so perfect a synthesis from vast meditations !

The rocky landscape is as full of detail as those of Mantegna. It shows us, besides its dolomite rocks, a winding road, a bridge, and many other things. Nothing could be further removed from the ample and harmonious landscapes of the Umbrian school.

With regard to this landscape, and those of Leonardo in general, M. Emile Michel, whose own reproductions of the most picturesque scenes are as skilful as his written comments on the work of former

landscapists, writes to me as follows : " In a letter addressed by Rumohr to Alexander von Humboldt, he declaims against the idea put forward by the author of *Kosmos* to the effect that the steep mountains which appear in the pictures by the early masters were a memory of the dolomite cones to be seen on certain Italian slopes of the Alps. He considers them as being more probably conventional imitations of antique bas-reliefs, or even perhaps fanciful forms. I believe that Humboldt and Rumohr are both right ; that the Primitives, and after them Mantegna and Leonardo, may have found the elements of their picturesque backgrounds in nature, but that they have exaggerated the details according to their own fancy, after a fashion which may be remarked in early Flemish landscape art, where also the Primitives multiplied detail, spreading out wide panoramas, accumulating buildings and mountains and water-



STUDY FOR THE HANDS OF THE "MONA LISA."

(Windsor Library.)

courses. In Leonardo's case," adds M. Michel, "the ground is treated as by Mantegna, cut up, in the foreground, in regular strata, hewn into sharp ridges, as in the works of the Primitives. The vegetation, on the other hand, is carefully studied. The artist's manuscripts prove how much botany occupied his attention."

Posterity has lavished expressions of admiration, almost of adoration, on the masterpiece in the Salon Carré. But does any one of these approach, either in eloquence or scope, the analysis of the picture left us by the earliest of all Leonardo's biographers, Giorgio Vasari ? " He who would know," he writes, " to what point nature may be imitated, can easily discover it by considering this head, in which Leonardo has represented the smallest details with an extreme subtlety. The eyes have the light and moisture to be seen in a living person : they are circled with reddish and leaden shadows of perfect truthfulness ; the lashes fringing them are painted with excessive delicacy. The eyebrows, the way in which they spring from the flesh, their vary-

ing thickness, the manner in which they curve according to the pores of the skin, could not have been rendered in a more natural fashion. The mouth, its opening, the corners, where the vermilion of the lips fades into the flesh of the cheeks—this is not painting, it is real flesh. An attentive observer might almost see the artery throb in the hollow of the throat; it must be acknowledged, in fine, that the execution of this figure is calculated to make the most skilful artist in the world draw back at the idea of attempting to imitate it.”

Vasari adds that after four years of assiduous labour, Leonardo left his work unfinished. What must have been the perfection of the ideal that floated in the master's brain, if he held such a finished masterpiece to be incomplete? We know the portrait in the Louvre has passed through some cruel experiences. What must have been the original beauty of the incomparable work, which, even defaced as it now is, still shines with so much radiance?

Leonardo, in his *Trattato della Pittura*, has treated at length of the relative superiority of painting over poetry. Was he not thinking of *La Gioconda* when he penned those memorable lines: “What poet, O lover! can make thine idol live before thine eyes as faithfully as does the painter?” Can any poem in the world, indeed, contend for mastery with such a picture?<sup>1</sup>

It is hardly probable that the portrait of *Mona Lisa* was the female portrait ordered by Giuliano de' Medici, and seen in Leonardo's studio by the Cardinal d'Aragon, in 1516. However that may have been, it is certain that this artistic gem was acquired by Francis I., at the price, we are told, of 4000 gold crowns—somewhere about £8000. *La Gioconda* was one of the glories of the Palace of Fontainebleau till after the reign of Louis XIV.

The masterpiece has been even more cruelly treated by man than by time. Over-zealous custodians have ruined it in their desire to ensure its preservation. As early as 1625, the Commendatore del Pozzo<sup>2</sup> noticed the ravages made by varnish on the dress.

<sup>1</sup> “Qual poeta con parola ti metterà innanzi, O amante, la vera effigie della tua idea con tanta verità qual farà il pittore?” (cap. xviii.).

<sup>2</sup> I think it well to reproduce the very curious account (part of it hitherto unpublished) left by Cassiano del Pozzo. “Un Ritratto della grandezza del vero, in tavola incorniciato di noce intagliato, è mezza figura, ed è ritratto d'una tal Gioconda. Questa è la più compita opera che di quest' autore si veda, perchè dalla parola inpoi altro non gli manca.

M. Durand-Greville's research has elicited the fact that before time and varnish together had done their work, the sky of the picture was of a pale delicate blue, the face dazzlingly clear and fresh, every eyelash carefully studied, and the eyes at once brilliant and liquid.<sup>1</sup>

Leonardo's relations with the Giocondo family were not limited—according to the anonymous biography published by Signor Milanesi—to his portrait of Mona Lisa. The artist appears to have also painted a portrait of Piero Francesco del Giocondo.<sup>2</sup> But may not this be simply a confusion of names?

The same anonymous pen informs us, as does Vasari, that while at Florence, Leonardo painted a portrait of Ginevra Benci, daughter or wife of Amerigo Benci.<sup>3</sup>

Of late years, a learned critic of Tuscan art, Signor Ridolfi, has questioned Vasari's statement, upon the following grounds.<sup>4</sup> Ginevra di Amerigo Benci was born in 1457, she married Luigi di Bernardo Niccolini in 1473, and died the same year. Leonardo, then, must have painted her picture before he went to Milan, and not after his return to Florence. He painted her, in fact, as Vasari asserts, while she was still a child, "quando era una fanciulla, e bellissima." Two other young girls of the family did, it is true, bear

La figura mostra una donna di 24 in 26 anni, di faccia, non al tutto alla maniera delle statue Greche di Donne, ma alquanto larghetta con certe tenerezze nelle gote e attorno ai labri e agl'occhi che non si può sperar d'arrivar a quella esquisitezza. La testa è adornata d'una acconciatura assai semplice, ma altre tanto finita, il vestito mostrava o negro, o lionato scuro, ma è stato da certa vernice datali così malconcio che non si distingue troppo bene. Le mani son bellissime, e in somma, con tutte le disgratie che questo quadro habbi patito, la faccia e le mani si mostrano tanto belle, che rapiscono chi le mira. Notamo che a quella Donna per altro bella mancava qualche poco nel ciglio, che il Pittore non glie l'ha fatto molto apparire, come che essa non doveva haverlo. . . . . Il Duca di Buckingham mandato d'Inghilterra per condur la sposa al nuovo Re hebbe qualche intention d'haver questo ritratto, ma essendone stato distolto il Re dall'instanze fatteli da diversi, che misero in consideratione che S. M. mandava fuor del Regno il più bel quadro che havesse, detto Duca sentì con disgusto questo intorbidamento e tra quelli con chi si dolse fu il Rubens d'Anversa, pittor dell'Arciduchessa." (Barberini Library, lx. no. 64, fols. 192, 194 verso.)

<sup>1</sup> *L'Artiste*, June, 1894.

<sup>2</sup> "Ritrasse del naturale Piero Francesco del Giocondo" (p. 11).

<sup>3</sup> "Ritrasse in Firenze, dal naturale, la Ginevra d'Amerigho Benci, la quale tanto bene finì che non il ritratto, ma la propria Ginevra pareva" (p. 10). Leonardo mentions the Benci several times. "Mappamondo de' Benci. Giovanni Benci, il libro mio, e'diaspri, ottone per li ochiali" (Richter, vol. ii. p. 437).

<sup>4</sup> *Giovanna Tornabuoni e Ginevra de' Benci, nel Coro di Sta. Maria Novella in Firenze*. Florence, 1890. (*Archivio storico italiano*.)

the same name, Ginevra di Bartolommeo di Giovanni d'Amerigo Benci, who was two years old in 1480, and Ginevra di Donato d'Amerigo Benci, who was three years old at the same period.

Rosini, the historian of Italian painting, quoted, in support of Vasari, a portrait in his own possession which he asserted to be Leonardo's original portrait. But this very mediocre work, which was bequeathed to the National Museum at Florence by Signor L. Carrand, shows no traces of Leonardo's hand.

These portraits lead me, by a natural transition, to consider Leonardo's ideal of female beauty, and the place occupied by woman in his life and work. I see a long and fascinating array, from the *Three Dancing Girls*, or *Bacchantes*, one of the young master's earliest drawings (p. 36), down to *La Gioconda*.



STUDY FOR THE HEAD OF LEDA.  
(Windsor Library.)

There is no recognised and authentic female portrait executed by Leonardo in his youth. All we have are a few drawings, and two or three sacred pictures (the authenticity of only one of which, the *Virgin of the Rocks*, is above

discussion), whereby we may guess at the type which then hovered before the eyes of the young beginner.

Something vague, indeed, there is about these faces. We should find it hard to discover any of what I will call a well-assimilated and well-matured type. Both the form of the faces and their expressions are still somewhat uncertain. The artist's hand had not as yet the full command of his instruments.

If the drawing in the Uffizi Gallery, representing a young woman with bent head, in profile (see our pl. iii.), and the *Annunciation* in the Louvre, with which the said drawing is closely connected, are really Leonardo's work, we see in them some of the master's





23

*A Study by Raphael from the "Mona Lisa."*

(THE LOUVRE.)



Printed by Draeger, Paris



earliest efforts in this particular direction. The heads, like those in the *Annunciation* in the Uffizi, are remarkable for their extreme mannerism; the hair is curled and waved with excessive care.

There is more decision in the fine drawing of the Uffizi Gallery: a young woman with long unbound hair downcast eyes, and lips straight rather than curved, facing the spectator. (Reproduced in colour, plate ii.)

In this drawing, as in the *Virgin of the Rocks*, Leonardo shows his preference for low and somewhat square chins. The same peculiarity is observable in the work of Bernardino Luini. At a later period, the artist is careful to round his chins so as to secure the most perfect oval possible.

Following this comes the type of the young woman with dishevelled hair and haggard eyes, examples of which are to be found in the Turin Library, the Windsor Library, and the Bonnat Collection.



STUDY FOR THE HEAD OF LEDA.  
(Windsor Library.)

Amongst the drawings for the *Adoration of the Magi* we note for the first time in the very important sketch in the Uffizi (admitting indeed, what is by no means clear, that this composition belongs to the Florentine period) that type "sui generis," which, for want of a better term, has been described as the Leonardesque type. This face, in which the mouth is a little tremulous, is an extraordinary and exquisite mingling of grace and *morbidezza*. The Virgin smiles, but her smile is one that recalls or foreshadows tears—a divinely human smile, of which Leonardo alone possessed the secret.

Later, on the contrary, Leonardo shows a preference for high and rounded chins. This inclination, already evident in his study for the *Madonna Litta* of the Hermitage, is still more clearly shown in

the study of a woman's head, on green paper, preserved in the Uffizi Museum, which I think may be connected with the *Saint Anne*.

Dreamy eyes, a somewhat strongly-marked nose, a melancholy mouth, a shade of gentleness, kindness, almost of weakness, over every feature, characterise a profile study in the Louvre, wonderfully rich and easy in handling. This is the drawing above-mentioned for the *Madonna Litta* (reproduced in our plate xi.).

As a pendant to this somewhat sickly physiognomy, we have the face of a young girl, of resolute, almost of pert appearance, some waiting-maid probably, portrayed in a drawing now in the Windsor Library (reproduced vol. i., p. 5). Her thin, sharp contours seem to indicate a Florentine origin.

From this time onwards, Leonardo shows excessive skill in draping his female models, in decking and adorning them. He proves himself in this respect a worthy fellow-disciple of Perugino, who, we are told, was so devotedly attached to his young wife, Clara Fancelli, that he delighted in arranging her dress with his own hands.

In the Queen of England's Collection at Windsor Castle, Leonardo's studies of the winding and twistings of water as it escapes from a reservoir, and those for the plaits of his *Leda*, have been placed in close juxtaposition, and not without good reason. The idea of connecting the refinements of fashion with the caprices of nature was one well suited to his sublime fancy.

Later in his life, the artist gradually evolved a kind of ideal costume, closely approaching the beautiful simplicity of classic models. In his *Trattato della Pittura*, when treating of draperies, he reminds us that a nymph or an angel should be represented in light garments, that either swell in the wind or cling close to the body under its action (cap. 539). Then he reveals his inmost thought, and advises the artist to avoid, as far as possible, any reproduction of the fashions of his own times. "Fuggire il più che si può gli abiti della sua età" (cap. 541).

The *Saint Anne* in the Louvre (the composition of which was determined in 1501, though not completed till long afterwards) gave the painter an opportunity of showing the world his ideal conception of female beauty. And in the first place, as M. Anatole Gruyer has pointed out in his delightful *Voyage autour du Salon Carré du Louvre*,

Leonardo, ignoring the inevitable difference in age between mother and daughter, has shown them both young with the same youth, and fair with the same beauty. "Both," adds M. Gruyer, "are enchantresses, with that gift of Italian beauty that is exuberant, yet always majestic. They seem compact of light and shadow. The tide of life runs full in their veins, without any taint of vulgar clay. Enigmatic, mysterious figures, instinct with a strange depth of sensibility—I had almost said of sensuality—which, while rousing our admiration, fills our souls with an agitation almost paralysing." A detail of costume must be noted here. The sleeves of the *Saint Anne* are pleated in the same fashion as those of *La Gioconda*: the two pictures are of the same date, or very near it.

The glorification of saints and martyrs appears to have had but little charm for Leonardo. The Sibyls would have attracted him far more. I cannot but think that he desired to portray one of these mighty and mysterious prophetesses in the tremendous silver-point drawing on green paper preserved in the Louvre Museum: a woman, full face, with great rolling eyes, and lips parted as if some prophecy were just about to break from them. Energy and inspiration are pictured here, with indescribable power.

A less startling, indeed an extraordinarily charming figure, is that of a young woman standing, in floating draperies, pointing with her left hand at some invisible object (vol. i., p. 121). Is this Dante's *Beatrice*, as has been recently affirmed? The hypothesis is not an unlikely one.

Standing before one of the master's very latest works, that mysterious figure in the Louvre which seems to emerge out of the darkness, bending a face, all bathed in light, upon us mortals, and raising an arm, of matchless modelling towards heaven, a tormenting doubt enters our minds. Is the *S. John the Baptist*—such is the title bestowed upon the picture—really man or woman? The voluptuous eyes, the straight delicate nose, the mouth with its bewitching smile, seem to hold a place midway between the half-length cartoon of a nude woman at Chantilly and *La Gioconda*. They form a combination of "Apollino," Bacchus, and Hermaphroditus.

The years 1504—1505, when Leonardo finished the *Mona Lisa*,

mark the apogee of his artistic talent. It was then he revealed his absolute mastery over the resources of his art, and notably his possession, to quote the felicitous expression of Charles Blanc, of the secret of modulations in the minor key. Never, either before this period or after it, did he carry his feeling for relief farther ; and his triumph is all the more brilliant because he obtained his effects by the legitimate resources of painting, without recourse to any of the methods of the sculptor.



FIRST IDEA FOR  
THE LEDA.  
(Codex Atlanticus.)

It was in all probability during his residence at Florence that Leonardo drew the *Triumph of Neptune*, on a sheet of paper, for his compatriot and intimate friend, Antonio Segni. Vasari praises the extreme finish of this drawing. It showed, he tells us, the stormy sea, the chariot drawn by sea-horses, with monsters ("fantasime") grampuses, winds ("noti") and some very fine heads of sea-gods. This drawing was given by Fabio, son of Antonio Segni, to Mesire Giovanni Gaddi, with the following inscription :—

Pinxit Virgilius Neptunum, pinxit Homerus ;  
Dum maris undisoni per vada flectit equos.  
Mente quidem vates illum conspexit uterque,  
Vincius ast oculis ; jureque vincit eos.

The central part of this composition is probably shown in the magnificent drawing from the Windsor Library, reproduced vol. i., p. 140.<sup>1</sup> No words can describe the life and movement, the intensity, the fancy, overflowing yet restrained, of this fragment. Every line is melodious, eloquent, and triumphant.

We have every reason to suppose that Leonardo was also working at this period on his picture of *Leda*.

Nothing can exceed the obscurity which veils the history of this composition. We know—and this through an anonymous biographer<sup>2</sup>—that the master did paint this subject ; and Lomazzo

<sup>1</sup> Müller-Walde, p. 88, no. 48. The Neptune in his chariot drawn by sea-horses may be compared with the analogous subject represented by the miniaturist Attavante in the frontispiece of the Missal of Mathias Corvinus (*La Renaissance au temps de Charles VIII.*, p. 384).

<sup>2</sup> De Fabriczy, *Il Codice dell'Anonimo Gaddiano*, p. 77.





AN OLD COPY OF THE "LEDA."  
(In the Baronne di Ruble's Collection.)

informs us that he represented Leda nude, with the swan on her breast, her eyes modestly downcast. The picture, he adds, was at Fontainebleau, with the *Mona Lisa*.<sup>1</sup>

In a recent article in the *Jahrbuch*, Herr Müller-Walde has pointed out, on a sheet of the *Codex Atlanticus*, which every student of Leonardo had handled and fingered without discovering anything at all, the painter's original sketch for the lost masterpiece. There can be no doubt about the matter. The sketch, though microscopic in dimensions, contains the germ of the whole idea of the *Leda*. She stands erect, holding in her left arm (the side of the heart) a confused mass which is easily recognisable as Jupiter under the form of a bird.

This subject was subsequently worked out by Leonardo in several drawings now in the Windsor Library, and more particularly in some studies of heads, in which the arrangement of the hair is of the most extraordinary character. I am aware that Signor Morelli claims these drawings as the work of Sodoma; but his theory will not bear investigation. Not only, indeed, is the treatment quite different from that of Sodoma, but the studies form part of a series which can only have been produced by Leonardo. And further, one of them bears an autograph note: "Da levare e pore."

Herr Müller-Walde, who is nothing if not prompt, has lost no time in marking out the various stages of the composition. A first version, according to him, was produced at Florence, between 1501 and 1506, and a second at Fontainebleau, between 1516 and 1519.<sup>2</sup> I do not myself altogether trust these geometric solutions, and will leave Herr Müller-Walde to sail alone on the wreck-strewn ocean of conjecture.

Signor Morelli, not content with robbing Leonardo to enrich Sodoma, has also, and for the same artist's benefit, filched an absolutely

<sup>1</sup> "Leonardo da Vinci l'osservò (l'atto della vergogna) facendo Leda tutta ignuda, co'l, cigno in grembo, che vergognosamente abbassa gl'occhi" (*Trattato della Pittura*, p. 164). "Come la Leda igunda ed il ritratto di Mona Lisa Napoletana che sono nella Fontana di Beleo in Francia" (*Idea del Tempio della Pittura*, ed. 1590, p. 6-7).

<sup>2</sup> The first edition is said to be characterised by the complicated plaits of hair that form a kind of interlacing ornament on the temples and poll. In the second the hair floats loose. But may not this modification have been introduced by some copyist? These were accustomed, in the sixteenth century, to take liberties with their originals, and gave themselves out, indeed, as imitators, and not as servile reproducers.

authentic drawing, at once naïve and bold, from Raphael himself. This, too, is in the Windsor Collection, and was certainly influenced by Leonardo's cartoon. In it the artist has reproduced with evident enjoyment the twisted plaits of Leda's hair.

This drawing, let me remark, proves that the cartoon of the *Leda* was at Florence, where Raphael must have copied it, and that it must have been there in 1505 or 1506, for this is the latest date which can be assigned to Raphael's copy.

Several other ancient copies confirm Raphael's testimony. In the first place, the Borghese Gallery boasts a picture which Signor Morelli at first proclaimed a masterpiece by Sodoma, but which, after due reflection, he described as a mere copy after the master, Herr Müller-Walde, on his part, pronounces it the work of Bacchiacca. (It is a far cry from Sodoma to Bacchiacca!)

The Municipal Museum at Milan has also acquired a very insipid study of a head, which seems to have been inspired by one of the Windsor drawings. This study, according to Signor Frizzoni, is an authentic work by Sodoma.<sup>1</sup>

Thirdly, we have a replica, exhibited in 1873 at the Corps Législatif, which has passed out of the collection of M. de la Rozière into that of the Baronne de Ruble.

Another copy, in Frau Oppler's collection, at Hanover, was painted, according to Müller-Walde, in France, during the last century, and is a reproduction of an older copy which has now disappeared.

The author of the catalogue of the Milanese Exhibition at the Burlington Fine Arts Club mentions several replicas of the *Leda*; one in the Grosvenor Club Gallery, one in the Doetsch collection, and one at Wilton.<sup>2</sup>

<sup>1</sup> *Archivio Storico delle Arte*, 1892, p. 275.

<sup>2</sup> Cook, *Burlington Fine Arts Club. Catalogue of Pictures by Masters of the Milanese and allied Schools of Lombardy*, London, 1898, p. xv. There was a *Leda* in the Malmaison collection, which passed into that of the King of Holland, with which it was sold in 1850. (It is said to be now at Neuwied, where it was banished, after having been for some time at Cassel.) This picture shows the mother of Castor and Pollux with one knee on the ground, tenderly lifting one of the twins, to whom she has just given birth. That hypercritical authority, the Baron von Rumohr, speaks in enthusiastic terms of this picture, which he takes to be a figure of *Charity*. Signor Morelli, on the other hand, ascribes it to a Flemish hand. My own view is clear. If the mother of Castor and Pollux is represented on her knees, she has no connection with Leonardo's *Leda*.

In all these copies a child or children appear on the ground to the left of the figure of Leda.

But what has become of Leonardo's original picture? And was it ever really at Fontainebleau? Père Dan, who published his *Trésor des Merveilles de la Maison de Fontainebleau* in the year 1642, makes no reference to it of any kind; and since his time no historian, as far as I know, has been able to find any trace of it.<sup>1</sup>

In spite of which the worthy Passavant, thinking to throw some light on this obscure subject, supplied Dr. Rigollot, author of the *Catalogue de l'Œuvre de Léonard de Vinci*, with the following note: "The *Leda*, which was formerly at Fontainebleau, and which is mentioned by Lomazzo, is a cartoon by Michelangelo, now at Berlin."

Concise as it is, this note is packed with inaccuracies.

In the first place, the Fontainebleau *Leda* really was Leonardo's *Leda*, as is easily shown. Michelangelo's *Leda* cannot be confused for a moment with Leonardo's work. In the first instance, the figure was recumbent. In the second, it was upright. Further, a replica of Michelangelo's *Leda* is still in existence—not at Berlin, but in London. The late Director of the National Gallery, Sir Frederick Burton, showed it me, some fifteen years ago, in one of the store-rooms of the Gallery.

But here is a yet more decisive fact. In 1625, the Commendatore Cassiano del Pozzo, the friend of Poussin and of Rubens, saw Leonardo's *Leda* on the occasion of a visit to Fontainebleau.<sup>2</sup>

So much, then, is clear. In 1625 the Palace of Fontainebleau did contain Leonardo da Vinci's *Leda*. The favourite of Jupiter was depicted standing, almost nude. Close to her, on the ground, lay two eggs, from each of which a pair of twins emerged. A highly

<sup>1</sup> Goldoni formally asserts, in a letter addressed to his friend de Pagave, at Versailles, and dated Dec. 18, 1775, that nobody in France had ever had any knowledge of a picture of *Leda* by Leonardo. "Lo stesso vi dirò della *Leda* di questo rinomato Pittore. Non esiste alcuna memoria in Francia ch'ella vi sia, nè ch'ella vi sia mai stata. Ho veduti ed esaminati varj registri e cataloghi de' quadri antichi del Re, ho veduto anche il catalogo de' quadri distrutti, e di statue mutilate per decisione d'una divozion malintesa, e la *Leda* del Vinci, non solo non vi si trova, mai Professori e gli amatori Francesi pretendono che mai vi sia stata, e che il Vinci non abbia mai composto un tal quadro" (Uzielli, *Ricerche*, vol. i., 1st ed., p. 124.)

<sup>2</sup> E. Müntz and E. Molinier: *Le Château de Fontainebleau au xvii<sup>ème</sup> Siècle*, p. 17.

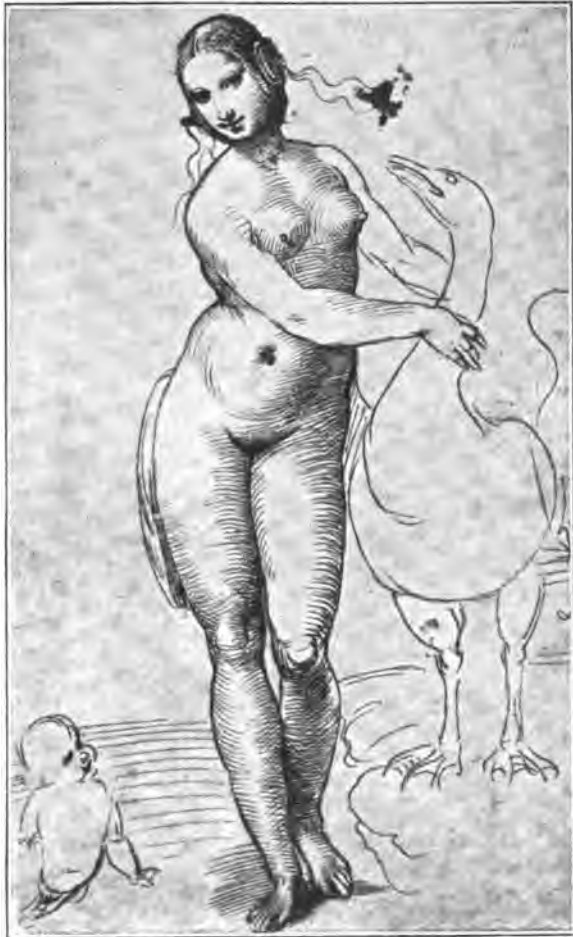
finished landscape surrounded the principal figure ; the panel consisted of three separate pieces.

The importance of this testimony, which I published ten years since, will not escape observation. It supplies a confirmation of Lomazzo's assertion, and proof that the above-mentioned copies reproduce Leonardo's *Leda*, as regards its general lines at all events.

Père Dan makes no allusion to the work, probably because it had been consigned to some store-room. It must have disappeared after 1694, for it figures in an inventory of that year, published by M. Herbot.

What has become of the masterpiece? Here, I confess, I see no light. Can Leonardo's creation, in spite of its modesty of treatment, have been cut up, like Correggio's *Leda*, by some devout bigot? Was it lost in some fire? Was it given by Louis XVI. to some foreign Sovereign, like the *S. John* bestowed by the French monarch on Charles I. of England? I refrain, in my complete ignorance, from putting forward any hypothesis whatsoever. I am content to demonstrate, by means of these ancient copies, the comparative accuracy of which I have just proved, with what modest grace, restraint, and dignity the master treated a most dubious subject.

Though, during his various residences at Florence between 1500



SKETCH BY RAPHAEL FROM LEONARDO'S LEDA.

(Windsor Library.)

and 1513, Leonardo does not appear to have used the chisel for any personal creation of his own, he certainly gave his young friend and host, the sculptor Giovanni Francesco Rustici (born 1474, died 1554) the benefit of his advice. He shared more or less directly in the execution of the group of three bronze statues with which Rustici adorned the Baptistry, and which were placed in position in 1511—*S. John the Baptist preaching between the Levite and the Pharisee*. According to Vasari, Leonardo's attention was especially given to the preparation of the moulds and to the iron framework intended for the protection of the bronzes, and he even worked with his own hands on the models. There can be no doubt about his influence on the work; it is evident in more than one detail. It struggles with that of Donatello and Michelangelo in these three most expressive figures.<sup>1</sup>

In Rustici's studio Leonardo met young Baccio Bandinelli, to whom he seems to have shown some friendliness. After seeing his drawings he advised him to attempt working in relief, suggested Donatello as his model, and urged him to do something in marble. Bandinelli did produce an imitation of an antique female bust, which he modelled from an original in the Medici Palace. My readers know how little this mischievous mediocrity justified the confidence with which his great and kind-hearted Mentor had honoured him.

Besides Rustici and Bandinelli, Leonardo gathered a certain number of young men, all of them unknown to fame, about him. As for the pupil described as "Il Fattore," I much doubt his having been Giovanni Francesco Penni,<sup>2</sup> for this artist (who was born not in 1486, as has been believed, but in 1496) was then only eight years old. Besides which, it would appear that Penni only received this surname in Raphael's studio. In conclusion, we may mention Jacopo da Pontormo, who, as Vasari affirms, worked for a short time under Leonardo's direction.<sup>3</sup>

All through this period, scientific enquiry alternated with artistic labour, though the last is not, perhaps, pursued with the same

<sup>1</sup> For Leonardo's relations with Rustici see *ante*, p. 64. (Cf. my *Histoire de l'Art pendant la Renaissance*, vol. iii. p. 409-411.)

<sup>2</sup> See Richter, *Leonardo*, p. 91.

<sup>3</sup> Milanese's edition, vol. vi. p. 246.

intensity as the first. In 1501, Fra Pietro da Nuvolaria writes to the Marchesa Isabella that Leonardo grows very impatient of his painting, and is devoting himself exclusively to geometry. At a later moment, he is busy with the arrangement and revision of his notes. In the spring of 1505 (March 14 to April 15) he is writing his treatise on the flight of birds.

From every point of view, Leonardo's residence in Florence was full of trials. He found himself involved in sordid discussions most painful to him, both as an artist and a man. When his father died (July 9, 1504), his brothers, on the score of his illegitimacy, refused him his share of the inheritance, a portion which, on account of the number of participants, could not in any case have been a large one. The business dragged on, and the final division of the property did not take place till April 15, 1506. But a matter which must have tried Leonardo even more severely was the attempt made by his brothers, after the death of his uncle Francesco, in 1507, to dispute his possession of the few roods of ground which the latter had expressly bequeathed to him by his will, dated August 12, 1504. This time, in spite of his dislike of business, and more especially of lawsuits, he appealed to the Florentine Courts. The suit was still undecided in 1511, and he was forced to seek the aid of the Maréchal de Chaumont, of Louis XII., and of one of his former protectors at Milan, Cardinal Ippolito d'Este, brother-in-law of Ludovico il Moro. The letter addressed by the painter to the cardinal is worthy of reproduction "in extenso." It shows us, amongst other things, the ease with which he already handled epistolary formulæ.

*"To the very illustrious and reverend Signor Ippolito, Cardinal d'Este,  
my very venerable Master at Ferrara.*

"MOST ILLUSTRIOUS AND REVEREND SIGNOR,

"I arrived here, but a few days since, from Milan, and finding that one of my brothers refuses to carry out the will left by my father at the time of his death, three years ago, I will not—though all good right is on my side—in order not to fail to myself, in a matter to which I attach importance, omit asking your very reverend Lordship for a letter for the Signor Raphael

Girolami, who is at present one of our very high and mighty Signors, before whom this business now lies, and who is further specially charged by his Excellency the Gonfaloniere with the said suit, which must be ended and decided before the feast of All Saints. Wherefore, my Lord, I beseech your reverend Lordship, with all my strength, to write a letter hither, to the said Signor Raphael, in the skilful and affectionate tone which you will know so well how to devise, to recommend Leonardo Vincio, your Lordship's very eager servant, as I still am and claim to be always, to his favour, and to request and authorise him not only to do me justice, but give me a favourable verdict; and I do not doubt, according to the numerous reports that have been brought to me, that the said Signor Raphael being filled with affection for your Lordship, things will turn out as we desire, which I shall attribute to the letter from your reverend Lordship, to whom I once more present my respects. Et bene valeat. Florence, this 18th of September, 1507.

"Your Very Reverend Lordship's very humble servant,

"LEONARDIUS VINCIUS, pictor."<sup>1</sup>

But, more than any other thing, the failure to fix the *Battle of Anghiari* upon the wall of the Council Hall disgusted the artist with a work which might have retained him in his own city.

So, once again Leonardo turned his face to a foreign country.

<sup>1</sup> Campori, *Gazette des Beaux Arts*, 1866, p. 45.



SKETCHES OF HEADS.  
(Windsor Library.)





THE MADONNA OF SANT ONOFRIO.  
(Rome.)

## CHAPTER VII

LEONARDO IN THE SERVICE OF LOUIS XII.—SECOND SOJOURN IN MILAN—VARIOUS MADONNAS — THE “BACCHUS”—CANALISATION WORKS—JOURNEY TO ROME—LEONARDO AND LEO X.—THE MADONNA OF SANT’ ONOFRIO.



HEAD OF A YOUTH.  
(Windsor Library.)

LEONARDO'S eyes were once more turned to Milan, where a regular government had been established by the French. What changes had taken place since his last visit! Let us take up our narrative at the point where we left off, the moment when Louis XII. crossed the Alps to assert his right over the Milanese, and to put an end to the usurpation of Lodovico Sforza.

Louis XII., a son of Charles of Orleans, the refined and somewhat bloodless poet, a grandson of that Valentina Visconti who, in the fourteenth century, had carried a foretaste of Italian art into France, was a very different person from his father-in-law, Louis XI. He took a real, if not always very intelligent, interest in art and letters. He had already become familiarised with Renaissance ideas through the expedition of his

cousin and predecessor, Charles VIII.; he had even had an opportunity at Amboise of frequenting the colony of Italian artists imported by that prince. Among them we know he had found one intimate in Domenico da Cortona (Il Boccador), the future architect of the Paris Hôtel de Ville, and another in Fra Gioconda. Louis, when he undertook the conquest of the Milanese (in 1499-1500), was not yet forty years of age, so that his mind was still open to new impressions.

It was in the smiling plains of Lombardy, among the mountains and the lakes, that French art first came into immediate contact with that of Italy. The French Renaissance, daughter of the Italian, had preserved an aroma of "naïveté" and youth, which the Florentine school, already on the decline which inevitably followed its apogee, could not have given it. Our artists, still imbued with the Gothic tradition, were irresistibly drawn to the picturesque forms, to the sincerity and charm, to the frankness, the ingenuous curiosity of the North, rather than to the purer design and finer style of the Tuscans. They found their happiest inspirations in the Pavian Certosa, in the piquant physiognomies, the tormented draperies, and the love for all kinds of amusing details, which marked the Lombard artists.

During his first stay in Milan, Louis XII. had already seen and admired the *Last Supper* of Santa Maria delle Grazie and the equestrian statue of Lodovico Sforza. His personal acquaintance with the artist seems, however, to have dated only from 1507, the year in which he again passed the Alps to take possession of revolted Genoa. The ground had been well prepared by Charles d'Amboise, whose admiration for Leonardo passed all bounds. The artist had only to reap what this protector had so generously sown for him.

Louis XII. was considerably in advance of his subjects. One of Leonardo's biographers, whom it gives me pleasure to quote,<sup>1</sup> has characterised the "entourage" of the French King from the point of view of taste, with much felicity: "Louis XII.," he says, "had brought with him, on his triumphal journey into Italy, a painter of Paris, his chief painter and valet-de-chambre, one Jean Peréal, who had been already called a second Zeuxis and a second Apelles. Louis wished him to set down on panel or canvas what the chronicler Jean

<sup>1</sup> Arsène Houssaye, *Histoire de Léonard de Vinci*, p. 179



XVII

*"The Virgin with the Scales." School of Leonardo.*

(not covered)



Printed by the British Museum, London, 1900.

Pl. VII



d'Auton and the poet Jean Marot were to describe in prose and in verse. It was a trio of Jeans, a happy diversion for the "intermezzi" of war, if not much of a light for history. By dint of industry Jean de Paris satisfied the demands of his office. He reproduced with the frank fidelity of his time 'the conquered towers and castles, and their sites, the voluble rivers, the capricious mountains, the undulating plains, the order and disorder of battle, the bloody horror of the dead, the misery of the wounded hovering between life and death, the terror of those who fled, the impetuous ardour, exultation, and lightheartedness of those who triumphed!' When Louis came back to France laden with Leonardo's drawings, men looked only at the works of Jean Peréal. The official historiographer made up for the non-arrival of the illustrious painter of the *Last Supper*, and Parisian vanity exalted Jean de Paris above the best artists to be found beyond the Alps!"

No sooner had the French King withdrawn, however, to his own country than Leonardo set himself anew to cultivate the friendship of his representatives, Florimond Robertet and Charles d'Amboise, to say nothing of his ally, Cæsar Borgia.

On the 30th of May, 1506, he obtained permission from the Florentine government to absent himself, on the condition that he returned at the end of three months, and reported himself to the Signory; default to be punished by a fine of 150 gold ducats. He returned, in fact, more than once to his native city, during the autumn of 1507, and the spring of 1509, as well as in 1511, 1513, and, finally, in 1514.<sup>1</sup> But he gave no more thought to his old commissions. For him, as well as for Soderini and the Medici, the *Battle of Anghiari* was dead and buried.

The Mecænas who summoned Leonardo into Lombardy was no other than the French King's Viceroy, Charles d'Amboise, Lord of Chaumont-sur-Loire (Loire-et-Cher), whence his title of the Maréchal de Chaumont. He belonged to a family which had always concerned itself with art, and was nephew to the famous Cardinal Georges d'Amboise, Archbishop of Rouen, who built the marvellous Château de Gaillon.

Born in 1473, Charles d'Amboise was only twenty when he settled

<sup>1</sup> Richter, vol. ii., p. 402-403; September 18, 1507. *Leonardo*, p. 94.

in Italy. In 1506 he was sent by Louis XII. to the help of Julius II. in his campaign against the Bolognese. The year after he was present at the siege of Genoa, and, in 1509, at the battle of Agnadel. In 1510 he besieged, in Bologna, that Pope Julius II. who from being the ally of the French King, had become his most implacable enemy. In 1511 he died, aged only thirty-eight.

The proofs of admiration lavished by Charles d'Amboise on Leonardo exercised the Florentine government not a little. Hitherto these gentlemen had been accustomed to look upon artists just as they did upon other members of the industrial classes. They considered them honest burghers, greatly attached to their civic duties, and more or less—generally less—taxable. Suddenly they found Popes, Kings, great foreign Princes, disputing their possession among themselves, and setting the whole diplomatic machinery in motion in order to attract this or that painter to their Courts. Julius II. claims Michelangelo, menacing with all kinds of penalties the city which should dare to obstruct his journey to Rome; Louis XII. and the Maréchal de Chaumont make an extension of Leonardo's leave of absence the price of their friendship; the Maréchal de Gié, or Florimond Robertet, intrigued to obtain Michelangelo's *David* from the Signory. In short, artists are rivalling the great ones of this world in importance! Soderini, brought up in the traditions of the old Florentine Republic, had some difficulty in adapting his ideas to the new conditions. His letters, not only those relating to Leonardo, but even those that concern his own friend Michelangelo, never cease to betray the contempt he felt for those fellow-citizens of his who devoted themselves to handiwork.

The negotiations between the French authorities in the North and the Florentine Republic were endless. On the 19th August, 1506, Jofredus Karoli and the Maréchal de Chaumont wrote from Milan begging the Signory to grant an extended leave—at least to the end of September, to Leonardo, with whose assistance the Maréchal could not possibly dispense any sooner.<sup>1</sup> Soderini's answer (October 9, 1506) betrays extreme irritation. Leonardo, he declares, has not comported himself towards the Florentine Republic as he should have done. "He has accepted a large sum of money, and in return has

<sup>1</sup> Gaye, *Carteggio*, vol. ii., p. 86—87.



done but little to the great work with which he was intrusted. We desire," adds the Gonfaloniere, "that no farther demand for an extension of his leave of absence be made, for his work must satisfy the general body (of the citizens), and we cannot dispense him from his obligations without failing in our duties."<sup>1</sup>

The 16th of December brings another letter from the Maréchal, in which Charles allows his enthusiasm for Leonardo to break through the terms in which he thanks the Signory for their consent to extend the artist's leave: "The excellent works," he writes, "left in Italy, and more especially in Milan, by Master Leonardo da Vinci, your fellow-citizen, have led all those who have seen them to have a singular affection for their author, even when they are personally unacquainted with him. For ourselves, we confess that we were among those who loved him even before our eyes had rested upon him. And now, since we have known him and been much in his company, and have had personal experience of his various gifts, we truly see that his name, famous in painting, is relatively obscure so far as those other branches of knowledge in which he has reached so great a height are concerned. And it pleases us to confess that in the efforts made by him to respond to no matter what calls we make upon his powers—architectural designs and other things relating to our state—he satisfies us in such a way that not only are we contented with him, but have even conceived an admiration for him. And therefore, as it has pleased you to leave him here all these days to do our will, it would seem to us ungrateful not to give our thanks to you on the occasion of his return into his own country. Thus we thank you as warmly as we can, and, if it be fitting to give a man of such talent a recommendation to his fellow citizens, we recommend him to you as strongly as we can, and assure you that you can never do anything, in the way of augmenting his fortune or comfort, or those honours to which he has a right, without giving, to us as well as to him, the most lively pleasure, and putting us under the greatest obligation to your Magnificences."

For the third time the whilom favourite of Lodovico Sforza and of Cæsar Borgia had exercised the arts of a consummate courtier ;

<sup>1</sup> Gaye, *Carteggio*, vol. ii., p. 86—87.

he had won the favour of the Maréchal de Chaumont, as a preparation for the conquest of the King of France himself.

A sight of the *Last Supper* had been enough to fascinate Louis. This we know from the letter addressed by the Florentine envoy, Pandolfini, to his government under date January 7, 1507: "This morning, when I was in the presence of the most Christian King, his Majesty addressed me, saying, 'Your Signory must do me a service. Write to them that I wish to employ their painter, Master Leonardo, who is now in Milan, and that I want him to make several things for me. Act in such a way that their lordships will order him to enter my service at once, and not to leave Milan before my arrival. He is an excellent master, and I desire to have several things from his hand. So write at once to Florence, sending me the letter. (This is the letter; it will reach you by way of Milan.) I replied that if Leonardo were at Milan your lordships would order him to obey his Majesty—although, as his Majesty was master in Milan ('essendo in casa sua'), he could give such orders as well as your lordships—and that if Leonardo had returned to Florence, your lordships would send him back to Milan as soon as his Majesty should demand it . . . . and the cause of all this is a little picture by Leonardo which has been lately brought here, and is considered an excellent piece. During our conversation I asked the King what kind of works he desired of Leonardo; he answered, 'Certain little Madonnas and other things, as the ideas may come to me. Perhaps I shall also cause him to paint my portrait.' Continuing the conversation, I talked to his Majesty of Leonardo's perfection and of his other qualities, and the King said he had already been informed of them, and asked me if I knew him. In order to safeguard your lordships, however matters might go, I answered that we were great friends. 'Very well, then,' added his Majesty; 'write to him at once, so that he may not leave Milan before letters arrive from your Signory.' I have therefore written a line to the said Leonardo, acquainting him with the good intentions of his Majesty, and exhorting him to show prudence ('essere savio'). Your lordships will, no doubt, promptly do all that you can to meet the desires of his Majesty."

Two days afterwards the King himself addressed the following

letter to the Signory : " Louis, by the grace of God King of France, Duke of Milan, Lord of Genoa, etc. Very dear and close friends : As we have need of Master Leonardo da Vinci, painter to your city of Florence, and intend to make him do something for us with his own hand, and as we shall soon, God helping us, be in Milan, we beg you, as affectionately as we can, to be good enough to allow the said Leonardo to work for us such a time as may enable him to carry out the work we intend him to do. And as soon as you receive these letters (we beg you to) write to him and direct that he shall not leave Milan until we arrive there. While he is awaiting us we shall let him know what it is that we desire him to do, but meanwhile write to him in such fashion that he shall by no means leave the said city before our arrival ; I have already urged your ambassador to write to you in the same sense. You will do us a great pleasure in acting as we desire. Dear and close friends, may our Lord have you in his keeping. Written from Blois, the 14th day of January, 1507. (Signed) LOUIS. ROBERTET." Addressed : " To our very dear and close friends, allies, and confederates, the Priors and perpetual Gonfaloniere of the Signory of Florence." <sup>1</sup>

The year 1507 was signalised by the French King's triumphal entry into Milan (May 24). Leonardo certainly had a share in the great preparations made to do honour to the occasion. Jean d'Auton tells us that between the cathedral and the castle, in a street in which were the city hospitals and asylums, an arch of greenery was erected

<sup>1</sup> The original French is as follows : " Loys, par la grâce de Dieu Roy de France, Duc de Millan, Seigneur de Gennes, etc., Trèschers et grands amys. Pour ce que Nous avons nécessairement abesognes de Maistre Léonard a Vince, peintre de votre cité de Fleurance, et que entendons de luy faire fer quelque ouvrage de sa main ; incontinent que nous serons à Millan, qui sera en brief, Dieu aidant, Nous vous prions tant et si affectueusement que faire pouvons que vous vueielliez estre contens que le dit maître Léonard besongne pour Nous pour ung temps qu'il aura achevé l'ouvrage que Nous entendons luy faire fer. Et incontinent toutes lettres que vous receves, lui escripvez que insynes à notre venue à Millan il ne bouge de dela ; et en Nous attendant, lui ferons dire et deviser l'ouvrage que Nous entendons qu'il fait : mais escripvez-lui de sorte qu'il ne se partes de la dite ville infines à notre venue, ainsi que j'ay dit à votre ambassadeur, pour le vous escripre, et vous Nous ferez très grand plaisir en ce faisant. Très chers et grands amys, notre Seigneur vous ait en sa garde. Escript de Blois le xiiii<sup>e</sup> jour de Janvier, 1507, LOYS. ROBERTET. [On the verso]. A nos très chers et grans amys, aliez et confédérés, les Prieurs et Gonfalonnier perpétuel de la Seigneurie de Fleurance."—Delécluze, *Saggio intorno Leonardo da Vinci*, Siena, 1844, p. 127.

which took up the whole width of the street. It bore the arms of France and Brittany, and was surmounted by a pinnacle decorated with shields, above which appeared the figure of Christ, stripped and bearing the marks of his flagellation, while at either end was a kind of pulpit or throne, draped with cloth of gold, the one containing an image of S. Ambrose, patron and protector of Milan, the other a sceptred representation of the French king. The whole description is interesting for the light it throws on a pageant of four hundred years ago.<sup>1</sup>

We see from the correspondence given above that, as early as 1506, Leonardo had sent a small picture to Louis XII.—probably a Madonna—and that in 1507 he was at work on another picture for his royal patron. On the 20th of April of this latter year the Maréchal de Chaumont restored to him, by way of recompense, the vineyard he had received from Lodovico shortly before the fall of that prince.<sup>2</sup>

Unhappily, the pictures painted in 1506 and 1507 have disappeared, and we cannot even be sure that any hint of what they were has survived in the master's drawings, or in the more or less faithful, more or less imperfect copies, which have come down to us.

Among those pictures which, without being by the master's own

<sup>1</sup> "Entre autres, entre le dôme et le château, dedans une rue nommée la rue du Mont de Piété, en laquelle sont les hôtels-dieu et les hôpitaux de la ville, avait un portail de verdure, tenant tout le travers de la rue, fait à piliers et arceaux de feuilles, et tout couvert de même, le dedans semé des armes de France et de Bretagne, et dessus avait un mont artificiel, de la hauteur d'un homme ou environ, lequel étoit tout autour environné à six rangs et semé d'écus au soleil, où pouvait avoir mille écus, ou plus ; et dessus le dit portail, au plus haut, étoit l'image de Notre Seigneur, tout nu et flagellé, aux deux bouts, et dans un échafaud qui là étoit, avoit deux chaires, parées de drap d'or, dedans l'une desquelles étoit l'image de Saint Ambroise, patron et protecteur de Milan, tenant un fouet en la main, et, en l'autre chaire, étoit l'image du roi, ayant le sceptre au poing. Tout autour de celui mont d'or, avoit quatre petits enfants, portant chacun une faille ardente, en signe de feu de joie. Et au pied de celui mont, étoient écrit ces vers :

' Exiguus qui collis erat, nunc aureus est mons,  
Hoc tua, Rex, mirum dextera larga facit.

"Après, étoit un grand curre triomphal à chevaux, dedans lequel étoient assises en chaire les quatre vertus cardinales, e'est à savoir : Justice et Prudence, au devant de celui curre, et Fortitude et Tempérance, au derrière ; et au milieu, sur une haute chaire, étoit assis le dieu Mars, dieu des batailles, tenant en la main dextre un dard aigu, et en la senestre main tenoit une palme, en signe de victoire." (*Chronique*, ed. Jacob, vol. iv., p. 67-69.)

<sup>2</sup> Uzielli, *Ricerche*, 1st edition, vol. i., p. 178-179



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*Christ in Hades (?)*.

(WINDSOR LIBRARY)



Printed by Draeger, Paris.





hand, may yet have something to do with the Madonnas painted at about this time, the *Virgin of the Scales* in the Louvre, and the *Holy Family* of the Hermitage, may specially be noticed.

The S. Petersburg *Holy Family* represents the Virgin seated, holding on her knees the Holy Child, who, with a smile, seeks the maternal breast. The young mother's costume consists of a red robe, lined with light blue, and a blue mantle lined with green. To the right stands S. Joseph, leaning on a staff, and smiling tenderly upon the sacred couple. He wears a white tunic and a brown cloak. To the left, S. Catherine reads a book; she wears a grey robe bordered with gold, and a red mantle, and holds a palm branch in her left hand. Near her we see the wheel, the instrument of her martyrdom. The figures are all half-length, except that of the Child Christ.

This *Holy Family* comes from the Mantua Gallery, which was dispersed after the sack of that city in 1630. It was added to the Russian Imperial collections by Catherine II.

Clément de Ris<sup>1</sup> and Woermann<sup>2</sup> are inclined to ascribe it to Cesare da Sesto.

This Hermitage *Holy Family* should be studied in connection with the *Virgin of the Bas-relief*, well known through Forster's engraving. The latter work passed from Woodburn, the dealer, into the collection of Lord Monson, at Gatton Park. It represents



PORTRAIT OF CHARLES D'AMBOISE, BY ANDREA SOLARIO.  
(The Louvre.)

<sup>1</sup> *Gazette des Beaux Arts*, 1879, vol. i., p. 343.

<sup>2</sup> *Geschichte der Malerei*, vol. ii., p. 564.

the Virgin, the Infant Jesus, the little S. John, S. Joseph, and S. Zacharias.<sup>1</sup>

In the *Virgin with the Scales* Mary holds the little naked Jesus on her lap. The Archangel Michael, kneeling on one knee, offers him a pair of scales, on which Jesus lays his hands. To the left S. Elizabeth caresses the little S. John, who in turn plays with a lamb. The scene is a grotto, with cleft rocks not unlike those of the *Vierge aux Rochers*. The expressions are uniformly smiling, and the scale of tones lacks force and depth. To me it appears doubtful whether even the composition was derived from Leonardo; the picture has been attributed both to Salai and to the mediocre d'Oggiono.

I may next refer to a certain number of sacred pictures the dates of which are not easy to fix.

Numerous drawings exist to prove that Leonardo at one time intended to paint a *S. George and the Dragon* (see below, p. 185). The drawing here reproduced seems to me to belong to his first Florentine period.

He must also have worked at a *Resurrection* and at a *Descent into Hell*. A Windsor drawing (no. 94 in the Grosvenor Gallery Catalogue) shows us a nude male figure, standing, holding in the left hand a long staff, and extending the right in the traditional gesture of a Christ summoning the souls in Limbo.

Leonardo was fond of fantastic subjects, and was even prone, on occasion, to a treatment which seems to us to border on irreverence. He proposed to paint the Madonna and the Child Jesus playing with a cat. Drawings on which this idea is treated in various ways are numerous.

One of the earliest of these is in the Library at Windsor. It contains three different suggestions for the group of the Holy Child making a cat stand up on its hind legs.<sup>2</sup>

<sup>1</sup> [At the sale of the Gatton Park collection, in 1888, this picture was bought by its present owner, the Earl of Carysfort, K.P. It is practically identical with the picture in the Brera, and only differs from that in the Hermitage, S. Petersburg, in minor details. All three are now acknowledged to be the work of Cesare da Sesto. (See the *Catalogue of Pictures by Masters of the Milanese and allied Schools of Lombardy*, printed for the Burlington Fine Arts Club, 1898. Ed.)]

<sup>2</sup> Among the Windsor cats we find leopards and lionesses, which also occur

Again, we find in M. Bonnat's collection a drawing full of "pentimenti," in which the Child plays with a cat; and a larger one, very rough in execution and evidently drawn without models, in which the cat is being tickled. Lower down on this paper are the Virgin—the inscrutable Leonardesque smile on her face—and the Child holding a cat, which jumps upon his knees.

The Uffizi possesses a drawing on prepared green paper, showing the Virgin seated and holding before her, on a sort of circular table or stool, the Infant Christ, who grasps a struggling cat. (Braun, no. 447.)

Then we have in the British Museum a washed drawing containing an extremely confused design for the same subject.<sup>1</sup>

There may be an interval of twenty years between these various designs. While the forms in the Windsor drawing still show an archaic touch (especially in the unsuccessful foreshortening of the Virgin's figure), those in the drawing at the British Museum are quite Raphaellesque in their breadth and freedom.

A theme like this might have led to much in the hands of a virtuoso like Leonardo, but we have no proof that he ever attacked it with the brush. His pupils, of course, poor in ideas as they were, took care not to lose sight of this one. Mantelli engraved a Child Jesus playing with a cat, over the name of Bernardino Luini.<sup>2</sup> Another imitator of Leonardo, Bazzi, called Il Sodoma, is said to be the author of a picture now in the Brera,<sup>3</sup> in which the Virgin supports the Divine Child, while he tenderly embraces a cat. Here the cat's head bears a curious resemblance to that of a lamb, or to that of the strange, long-muzzled animal (a weazel?), represented in the unsympathetic female portrait of the Czartoryski Gallery at Cracow.

The idea long bore fruit. Giulio Romano painted a *Madonna*

among the drawings of horses in the same collection. These same leopards and lionesses re-appear in the Louvre drawing, a man defending himself with a shield from which dart rays of light.

<sup>1</sup> Wallis, *Art Journal*, 1882, p. 33-36. Cf. Müller-Walde, p. 102-103.

<sup>2</sup> *Raccolta di Disegni . . . incisi sugli originali esistenti nella Biblioteca ambrosiana*; Milan, 1785, pl. xxii.

<sup>3</sup> Published by Frizzoni, *Archivio Storico dell'Arte*, 1891, p. 279.

*del Gatto*.<sup>1</sup> Titian varied the conception by leaving us a *Madonna with a Rabbit* (the Louvre and the Naples Museum).

It may have been during his second stay in Milan, from 1506 onwards, that Leonardo painted the *Bacchus* of the Louvre. The conception is well known. Seated on a rock, the left leg bent upon the right, the left arm carelessly supporting a thyrsus, and the right hand extended, the vine-crowned god of wine seems to enjoy the beauty of the landscape about him.

The identity of motive between this picture and the *S. John the Baptist*—also in the Louvre — has led several critics to believe that here again we have a representation, not of Bacchus, but of the precursor of Christ. And, in fact, the Church of Sant' Eustorgio, at Milan, possesses a



STUDY FOR THE "MADONNA DEL GATTO."  
(Windsor Library.)

picture, certainly a *S. John the Baptist*, identical in every respect with that in the Louvre, save for the crown of vine leaves. The same saint again is represented in the picture from the Penther Collection (sold at Vienna in December 1887), which is a textual reproduction of the Louvre picture.<sup>2</sup> The thyrsus must have usurped the place of the reed cross. On the other hand, Leonardo's contemporary, F. A. Giraldi, celebrated the painter's *Bacchus* in the following distich, published by the Marquis Campori:—

BACCHUS LEONARDI VINCI :  
Ter geminum posthac, mortales, credite Bacchum  
Me peperit docta Vincius ille manu.

The Louvre picture is remarkable for its comparatively high

<sup>1</sup> Passavant, *Raphael d'Urbino*, vol. ii., p. 252-253. [Baroccio also painted a *Madonna del Gatto*. Ed.]

<sup>2</sup> A. Gruyer, *Le Salon Carré*, p. 36.



XVIII

“*The Holy Family.*”

(THE HERMITAGE, ST. PETERSBURG.)



Printed by G. G. G. Paris - France

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tones (except on the right), but the carnations are redder and of a more commonplace tonality than the other Leonardos in the same collection. I cannot help thinking that the hand of Marco d'Oggiono is to be recognised in the execution.

As for the landscape, which is enlivened by the introduction of a bear and a pair of stags, it is vaguer and less precise than is usual with Leonardo. It contains his favourite sugar-loaf mountains; but the arrangement of the trees, as M. Emile Michel pointed out to me, is more frankly picturesque. In the foreground we see one of those bunches of columbine with which Leonardo was so fond of besprinkling his manuscripts, side by side with hellebore, anemones, and strawberry plants.

The history of the *Bacchus* cannot be traced beyond the seventeenth century. According to Cassiano del Pozzo it was in the Palace at Fontainebleau in 1625.

It does not require much insight to understand that, from the time of Leonardo's second stay in Milan, the French Court exerted all sorts of pressure to induce him to take up his residence in France. The master refused, however; and the Cardinal d'Amboise, who was then working at the Château de Gaillon, was obliged to make shift with one of his disciples, Andrea Solario.

We hear, indeed, of a letter addressed to Leonardo in 1509 with this superscription, "Monsieur Lyonnard, peintre du Roy pour Amboyse."<sup>1</sup> My learned col-



STUDY OF A PANTHER.  
(Windsor Library.)

league and friend, M. Charles Ravaisson-Mollien, is also inclined to believe that the artist sojourned in France between the spring of

<sup>1</sup> Amoretti, p. 105-106.

1507 and the autumn of 1510.<sup>1</sup> But Signor Uzielli has successfully refuted this hypothesis.<sup>2</sup>

His lawsuit with his family obliged Leonardo to return to Florence in 1507. On this occasion Louis XII. gave him a testimonial of the warmest description. "Very dear and close friends," he wrote to the Florentines, "we have been informed that our dear and much-beloved Leonardo da Vinci, your painter and military engineer, has a difference and plea at law pending at Florence, between his brothers and himself, on account of certain inheritances. Seeing that he cannot attend duly to the pursuit of the said law-plea while employed near and about our person, also that we desire warmly that a happy end should be put to the said litigation with as much expedition as may be consistent with justice, we have thought well to write to you and pray that in this matter you will see that true justice is done with as little delay as possible. You will do us a great pleasure if you will act as we desire. Very dear and close friends, may our Lord have you in His keeping. Written at Milan, the xxvi. day of July (1507), (signed) LOYS.—ROBERTET." Addressed on the back to "Our very dear and close friends, allies, and confederates, the perpetual Gonfaloniere and the Signory of Florence."<sup>3</sup>

Less than three weeks after the date of the King's letter, on the 15th of August, 1507, Charles d'Amboise addressed another to the Signory, urging them to hasten the artist's return: "Most exalted Lords: Master Leonardo da Vinci, painter to his Most Christian Majesty, is on his way to you. As he is engaged on a picture for his Majesty, we have, much against our wills, given him the leave he demanded, in order that he might put an end to certain difficulties which have arisen between himself and his brothers in the matter of a heritage left to him by an uncle. In order that he may return promptly to finish the work he has begun, we beg your Excellencies to lend him all the help and protection that may be just, so that his case and his general affairs may be settled with all possible expedition. In doing this your Excellencies will give pleasure to his Most Christian Majesty

<sup>1</sup> *Les Écrits*, p. 55-57. *Les Manuscrits*, vol. iv., p. 3.

<sup>2</sup> *Leonardo da Vinci e le Alpi*, p. 3-4.

<sup>3</sup> Del'cluze, *Saggio intorno a Leonardo da Vinci*, p. 128.

and also to ourselves. Given at Milan. In everything yours,  
D'AMBOISE." <sup>1</sup>

At the beginning of the autumn of 1508 (certainly by September 12) Leonardo was back in Milan.<sup>2</sup> A month later he wrote on the first leaf of an album the following note: "Bought at Milan, the 12th of October, 1508." On page 29 of this same album we find the sketch of a lock or weir ("scaricatoio"), intended for the "naviglio grande," and on page 76 a dissertation on the Martesana canal. A drawing of the "scaricatoio," near San Cristoforo, which still exists, is to be found in the *Codex Atlanticus*, accompanied by the note: "Canal of San Cristoforo at Milan, made on the 3rd of May, 1509." <sup>3</sup>

By all this we are left in no doubt as to how Leonardo employed his time between 1508 and 1510, or thereabouts.

In the first place, let us see in what his canal works consisted.<sup>4</sup> In order to open navigation all the way from Milan to Como, it was necessary to prolong the Martesana canal from Tressio to Brivio, and to construct two sets of locks in the length of about six miles and a half. Leonardo thought out the scheme (*Cod. Atl.* fols. 137, 139, 233, 328), which was taken up again in 1519 with variations. It was finally put into execution at the end of the sixteenth century, by the engineer Meda. Mazzenta tells us that in his time the canal was called *the Machine of the French*. I may add that it was not a success, because Meda failed to understand the economy of Leonardo's scheme. Venturi tells us that, in his time, many improvements had been added to the original work.<sup>5</sup>

Louis XII. rewarded his artist-engineer with a permit to take twelve "ounces" of water from the main canal at San Cristoforo, a measure which, according to Venturi, corresponds in the Milanese to a water-way of some importance.

Unhappily he had long to wait before he obtained any benefit from

<sup>1</sup> Gaye, *Carteggio*, vol. ii., p. 97.

<sup>2</sup> Richter, vol. ii., p. 416. One of Leonardo's dated notes: *Cominciato a Milano a di 12 di Settebre, 1508.*

<sup>3</sup> *Saggio*, pl. vi.

<sup>4</sup> Venturi, *Essai*, p. 39-40. Beltrami claims the Poderno canal, so-called, for della Valle or de Massilia.

<sup>5</sup> *Essai sur les Ouvrages . . . de Leonard de Vinci*, p. 38.

this privilege.<sup>1</sup> In 1511 (approximately) he found himself obliged to address a very pressing letter to the Maréchal de Chaumont, in which among other things he says: "I suspect that my feeble recognition of the great benefits I have received from your Excellency has indisposed you towards me, and that is why so many letters addressed by me to your lordship have never had an answer. To-day I am sending Salai to inform your lordship that my litigation with my brothers is nearing



STUDY FOR THE "MADONNA DEL GATTO."  
(Bonnat Collection, Paris.)

its end, and that I hope to be in Milan by Easter. I shall bring with me two pictures of the Madonna, different in size, intended for the Most Christian King or for any one else that your lordship may choose. I shall be glad to know where I am to fix my habitation when I return, as I wish no longer to incommode your Excellency. I should also like to know besides, having worked for the Most Christian King, whether my pension is to continue or not.—I am writing to the President about the right of water the

King gave me. I have never yet been put in enjoyment of the privilege, because at the time there was not much water in the canal in consequence of the great drought, and because the openings (?) had not been regulated. But he promised that I should

<sup>1</sup> We may note that in 1510 and again in 1511, "Me. Léonnard painctre" figures on the budget of the Duchy of Milan for the sum of 400 livres a year (*Chronique de Jean d'Auton*, ed. de Maulde, vol. ii., p. 386).

be put in possession as soon as the regularisation had been made. I pray your lordship, then, to be good enough to take the trouble, now that the openings are regulated, to remind the President of my rights, so that I may get the said water; for I hope, when I come, to make machines and other things which will give great pleasure to our Most Christian King. I have nothing more to tell you. I am always at your orders." In another letter, addressed to Francesco Melzi, Leonardo returns to these same claims, which were in the end satisfied.<sup>1</sup>

Once more, in 1509, Louis XII. wrote his name large on the Fasti of Milan, which at that time contained so many brilliant pages. Once more, on the first of May, he made a "Joyeuse Entrée" into the ancient capital of the Visconti and the Sforzi. It is said that the master of the ceremonies was no other than Leonardo, and that the preparations took no less than forty-six days. The King then passed eight days in Milan. He returned there on July 1, when, as the conqueror of Agnadel, he was received with still greater magnificence.<sup>2</sup>



THE VAPRIO MADONNA.  
(School of Leonardo.)

The artistic and scientific labours of Da Vinci were interrupted now and then by excursions into the country round Milan, especially to Vaprio, situated at some distance from the capital, between Gorgonzola and Bergamo, on the Adda. The Melzi had a property there. We know that he was there on the 5th of July, 1507, for on that day he thence addressed a long letter to his step-mother, his

<sup>1</sup> Uzielli, 1st edition, vol. i., p. 190-196.

<sup>2</sup> Of this the chronicler Prato has left us an enthusiastic description (*Archivio storico italiano*, 1842, vol. ii., p. 277).

sister, and step-sister. The letter is dated from "the Canonry of Vaprio."

The Melzi family had a house near the canon's; their palace, properly speaking, was a little farther off.<sup>1</sup> It was on the façade of this Palazzo that a colossal Madonna and Child was painted. The head of the Virgin was six palms high, that of the Child, four; the Virgin's figure was shown to the knees: "What beautiful tresses of hair fall round the Virgin's head!" cries P. della Valle; "how fat the carnations! What morbidezza! What contours! Here, any one can see that Correggio sprang from the school of da Vinci!"

Criticism was long unanimous in ascribing this painting to Leonardo. It was greatly damaged in 1796 by soldiers, who lighted a brazier in front of it, careless of the masterpiece. Nowadays every critic provides it with a new attribution: "tot capita, tot census." According to Messrs. Morelli and Frizzoni, the true author was Sodoma, who may have painted it between the years 1518 and 1521.<sup>2</sup> They found their opinions chiefly on the fact that the work was done in fresco, a method never used by Leonardo. The new edition of the *Cicerone* gives this Madonna to a pupil. To my eyes, the type of the Child Jesus, still so archaic, suggests the Florentine models of the end of the fifteenth century, and consequently involves the more or less direct intervention of Leonardo.

We must retrace our steps for a moment to mention a commission received by Leonardo in 1510, from the authorities of Milan Cathedral. They asked him to furnish designs for the choir stalls, conjointly with various distinguished artists—G. A. Omodei, Andrea da Fusina, and Cristoforo Solari. Such a proceeding at least shows the esteem in which the Milanese held their quasi-compatriot. Understanding his superiority, mingled with so much independence and originality of character, they knew how difficult it was to get so transcendent a genius to stoop to such a piece of work as a model or

<sup>1</sup> Certain writers declare, quite without foundation, that Leonardo himself furnished the designs for the Palazzo Melzi, in 1481. (C. Calvi, *Notizie dei principali Professori di Belle Arti*, vol. iii., p. 17.)

<sup>2</sup> See Frizzoni, *Arte italiana del Rinascimento*, p. 158-160.



XIX

*Study of a Woman.*

(MUSÉE CONDÉ, CHANTILLY.)





17. Sandro Botticelli, 'Venus Writing a Letter', 1485.

17. 1485



design for the cabinetmaker. But they wished to show him that even in such a matter they would not pass him by.<sup>1</sup>

The master found time to interest himself in the discovery of stone quarries. In 1511 he mentions a quarry of "pietra faldata," at Monbracco, near Saluzzo, which yielded stone as white as Carrara marble. His friend, Master Benedetto, had promised him a sample.<sup>2</sup>

The Milanese meanwhile had once more changed masters. The Governor, Charles d'Amboise, had died in 1511,<sup>3</sup> after an administrative career, which would seem to have been extremely stormy.<sup>4</sup> On Easter Day, 1512, Gaston de Foix, the general of Louis XII. and a "spoilt child of victory," died at Ravenna in the midst of his triumphs. A few months afterwards the French had to evacuate Milan, where nothing but the Castle remained in their hands. Scarcely had they made their exit by one gate than Maximilian Sforza, Il Moro's eldest son, made his entry by another. This was on the 29th of December, 1512.

If any one should have felt embarrassment before the son of Lodovico, it was assuredly Leonardo, who had transferred his allegiance so readily to Il Moro's supplanters. Maximilian, who was born in 1491, was twenty-one years old at the time of his triumphal return, so that the memory of his father's wrongs must have been hot in his breast. But, in those days, there was no time to waste upon the gratification of private hatreds.

Several portraits of Maximilian have been appealed to as proofs

<sup>1</sup> Costruzione degli stalli del coro, 1510, Lunedì, 21 Ottobre. "Facto verbo de stadiis fiendis in ecclesia majori, ordinatum est quod vocentur infrascripti, videlicet dom. Jacobus Rabia, Marcus Antonius Dugnanus, Franciscus Coyrus, alias ex deputatis præfatæ fabricæ, et super dictis stadiis fiendis electi, nec non magistri Johannes Antonius Homodeus, Andreas de Fusina, præfatæ fabricæ ingenierii, ac magistri Leonardus Florentinus et Cristophorus Gobbus, quatenus accedant ad cameram præfatæ fabricæ die jovis proxime futuri hora debita consilii." (*Annali della Fabrica del duomo di Milano*, vol. iii., p. 153.)

<sup>2</sup> Richter, vol. ii., p. 245. Is not this the Florentine, Benedetto da Rovizzano (b. 1474; d. after 1552)?

<sup>3</sup> A description of his funeral, which took place on the 18th of December, is given by Prato (*Archivio storico italiano*, vol. iii., p. 283).

<sup>4</sup> Among Leonardo's notes we find the following: "On the 10th day of December, at 9 o'clock A.M., fire was set to the place." "On the 18th day of December, 1511, at 9 o'clock A.M., this second fire was kindled by the Swiss at Milan, at the place called DCXC." (Richter, vol. ii., p. 235.)

that the artist and the son of his old protector were soon reconciled, but the ascription of these portraits to Leonardo can no longer be accepted.<sup>1</sup>

Maximilian, moreover, did not long enjoy this return of fortune. In 1513, his subjects revolted on the approach of the French. Although his power seemed to be restored in 1513, after the rout of Louis XII. at Novara, the defeat of Marignano put a final end to his domination two years later. He was obliged to renounce his rights over Milan, and, like so many of Leonardo's friends and protectors—Lodovico Sforza, Trivulzio, the sculptor Rustici—he ended his days in France. His death took place in Paris, in 1530.

Leonardo's destiny was a sad one. Old before his time and prematurely bald, at the age of sixty he had to seek a new protector and a fresh asylum. We shall next find him at Rome, and in the service of Pope Leo X.

A political revolution drove Leonardo from Milan; another, more pacific in character, sent him to seek his fortune in Rome. Julius II., the soldier Pope, who was accustomed to enter towns by the breaches he had battered in their walls, had been succeeded on the 11th March, 1513, by Giovanni de' Medici, son of the great Lorenzo, and inheritor of long-established traditions of luxury and taste, who had taken the name of Leo X. No sooner had the choice of the Conclave become known than, from far and near, all who plumed themselves on their fame in art—architects, sculptors, painters: Fra Bartolommeo, Sodoma, Signorelli, Timoteo Viti, etc.—hastened to the precincts of the Vatican.

Leonardo took for granted that a Sovereign Pontiff with a passionate love of the arts, would give a cordial welcome to a compatriot and former protégé of his father, Lorenzo; and he at once set out for Rome. He may have made the acquaintance of the Cardinal de' Medici, the future Leo X., during his captivity at Milan after the battle of Ravenna.<sup>2</sup>

<sup>1</sup> Amoretti, pp. 63, 103. The drawing published by Gerli (pl. xvii.) is not by Leonardo, but by the painter of the altar-piece in the Brera, in which Lodovico Sforza and his family are introduced. It is a study for one of the figures in this picture.

<sup>2</sup> Cf. Prato, *Archivio storico italiano*, vol. iii., p. 297.

In one of his notes the master lets us know that he left Milan for Rome on the 24th of September, 1513, accompanied by Giovanni, Francesco Melzi, Salai, Lorenzo,<sup>1</sup> and Fanfoja.<sup>2</sup>

On the 27th of September, the procession halted at Sant' Angelo, on the Po.<sup>3</sup>

At Florence—if I do not misunderstand a passage in Vasari—Leonardo attached himself and his following to Giuliano de' Medici, who was about to leave for Rome, to join his brother, the Pope. It is not impossible that Giuliano, who, if we may believe Vasari, busied himself a good deal with philosophy, and especially with alchemy, was attracted by the air of mystery by which the painter was surrounded. However this may have been, he hastened to attach Leonardo to his own person, assigning him a monthly sum of thirty-three gold ducats (about £66), a magnificent salary when compared with the usual amounts then paid to artists. He assigned, moreover, seven gold ducats a month to Giorgio Tedesco (George the German), Leonardo's pupil. These relations between artist and patron continued until 1515.<sup>4</sup>

During the journey Leonardo amused himself by bewildering his companions with tricks which had more to do with conjuring than with science. He fashioned animals out of light sheets of wax, which floated for a time when inflated with air, etc. (See above, p. 66.)

This, no doubt, was not Leonardo's first visit to Rome. The close relations between Florence and Rome and the ease with which the journey could be accomplished, make it pretty certain that he had travelled between the two cities more than once. A document published by Gaye<sup>5</sup> tends to prove that he made an excursion to Rome about 1505. We there learn that the Florentine government paid eighteen lire, nine soldi, and eight decimi to the Customs as duty upon a "fardello di sue veste fatto venire da Roma."

<sup>1</sup> This Lorenzo is referred to in a letter from Leonardo to Giuliano de' Medici (Richter, vol. ii., p. 407-409).

<sup>2</sup> The Marchese d'Adda proposes to read Zamboja (Bambaja, the famous sculptor) for Fanfoja in the passage which enumerates the pupils who accompanied da Vinci to Rome (*Gazette des Beaux Arts*, 1876, vol. ii., p. 488).

<sup>3</sup> Richter, vol. ii., p. 441.

<sup>4</sup> See my *Raphael*, 2nd edition, p. 421-422.

<sup>5</sup> Carteggio, vol. ii., p. 89.

When we remember his age and the tendencies to which he had remained faithful for the whole of his life, in spite of the instability of his temper, we may fairly assert that Leonardo saw the wonders of the great pagan and Christian capital with indifference, or at least without enthusiasm. Works of art moved him less than those of nature. So far as the classic master-pieces were concerned, he rather loved them instinctively than studied them with any sort of method.

He found, of course, a certain number of friends and acquaintances on the banks of the Tiber. In the first place there was Atalante del Migliarotti, who had studied with him in the studio of Verrocchio, who had accompanied him to Milan, and who now, fallen somewhat in the world, filled the comparatively humble office of pontifical clerk of the works. Another Florentine, now settled in Rome, was Giuliano da San Gallo, the famous architect. He had lived for a time in Milan, and there, doubtless, had become acquainted with Leonardo. The splendours of Lodovico's court were also, no doubt, recalled to his mind by the presence of Bramante, the great architect, and Caradosso, the medal-list, both of whom had earned, by dint of genius and papal favour, the standing of Roman citizens. It also seems to me certain that Leonardo made the acquaintance of Giovannantonio Bazzi, called *Il Sodoma*, who, without being his pupil, adopted his principles and had an enthusiastic admiration for his work. This Lombardo-Sienese had been attracted to Rome, like so many others, by the election of a Medici to the papal throne. I shall hazard the same conjecture with regard to Raphael. The two princes of painting must have known each other in Florence; and working daily in the Vatican, they must there have resumed their friendship. Unhappily, no allusion to any connection between them is to be found in the letters or sketches of either. The presence in Rome of Michelangelo, Leonardo's ancient enemy, may have struck a discordant note in the general harmony, but he could not hurt da Vinci's interests, for his own star was for the moment in eclipse.

The Ambrosiana at Milan, so rich in false Leonardo drawings, possesses on the other hand an old man's portrait in red chalk, with energetic features and an expression at once sarcastic and morose. This drawing I ascribe with some confidence to Leonardo, in spite

of an ear with which the critic might reasonably find fault. The thing I wish to point out about it is not so much the subtle vigour of the execution, as a certain family likeness, as it were, to a figure in one of the frescoes in the Hall of Constantine, in the Vatican. Long ago, when studying the fresco which represents Leo X. approving the plans of the new S. Peter's, I was struck with the presence of a bald and bearded individual in the middle of the composition, standing, and unrolling, with an air of remarkable assurance, Bramante's plans for the great undertaking. The fresco, no doubt, has been more than half repainted, but an old engraving by Sante Bartoli is sufficient evidence that the heads have not been altered in their essential features.

In spite of his energetic features and air of authority, this old man would not have made any special impression upon me, but for the fact that he re-appears in the *Dispute of the Sacrament*. There he is, standing behind the group on the extreme left, and, significantly enough, again close to Bramante. It is clear that we have not here to do with some casual model, chosen by Raphael for his expressive features alone. The man who lays the plan of the basilica before Pope Leo X. is obviously one of the chief actors in that gigantic enterprise. He is not Bramante, whose features are well known. Why, then, should he not be the other chief pivot on whom the whole work turned, from the administrative standpoint? Why should he not be Giuliano Leno, superintendent of the fabric of St. Peter's? "Bramante," Vasari tells us, "left behind him Giuliano Leno, who played a considerable rôle in the building works of his time. He was more skilful in superintending the execution of other people's plans than in making designs on his own account, although he possessed a sound judgment and a wide experience." The Ferrarese ambassador tells us that Raphael felt the effects of a sort of melancholy when he took up architecture after Bramante's death; he disputes, he says, the practice of that art with Giuliano Leno.<sup>1</sup>

This conjecture made—I dare not say this point established—I return to Leonardo and the Ambrosiana drawing. The reproductions here given will enable the reader to appreciate the likeness between the individual portrayed by Raphael in the *Disputa* and by Giulio

<sup>1</sup> See my *Raphael*, 2nd ed., pp. 315, 585, 586, 638.

Romano or his assistants in the fresco of the Sala di Constantino on the one hand, and Leonardo's old man on the other. I am quite alive to the necessity for reserve, not to say scepticism, in matters iconographic. But I cannot help being impressed by all these points of contact!—the large aquiline nose, the contracted eyebrows, betraying an obstinate will, the brilliant eyes and sarcastic mouth, the bald

cranium and thick short beard, the prominent jaw!



SUPPOSED PORTRAIT OF GIULIANO LENO.  
(Ambrosiana, Milan.)

But you may ask, when and where did Leonardo see Giuliano Leno? The answer is easy. At Rome, in 1513. I have published, in *Historiens et Critiques de Raphael* (p. 133), a document in which, among the "lavori fatti fare da M. Giuliano Leno," the repair of the "stanze tiene a Belvedere Leonardo da Vinci" is expressly mentioned. Here we have relations well

and duly proved, between the Florentine painter, living for the moment in Rome, and the superintendent of the fabric of St. Peter's.

If my researches have brought to light yet another individual who had to do with Bramante, Raphael, and Leonardo, I shall consider my unusual excursion into the realm of conjecture more than repaid.

Leo X. welcomed Leonardo with great cordiality, and gave him a lodging in the Belvedere itself. There we find him installed in the month of December, 1513.

The story goes that the Pope, having given him a commission for a picture, he began at once to distil herbs and oils in order to make the varnish; whereupon Leo exclaimed, "Alas! this man will do





XX

"*Bacchus*" or "*S. John.*"

(THE LOUVRE.)



Painted by the personification of truth

1. 11



nothing, for he begins to think about the finishing of his picture before he gives a thought to the commencement!" (Vasari.)

One of the Pope's favourites, his Datarius, Baldassare Turini of Pescia, the close friend of Raphael, was better treated. For him Leonardo painted, with an infinity of taste and care, a little picture representing the *Virgin holding the Infant Jesus in her Arms*. But, either through the fault of the assistant who prepared the canvas or the panel, or on account of the numerous and fantastic combinations of pigments and varnishes in which Leonardo took such delight, the picture was already in a very bad state in the time of Vasari. The biographer saw it at Pescia, in the hands of one Giulio Turini, who had inherited it from Baldassare. It had for companion another little picture, also by da Vinci, which contained an "infant of enchanting grace and beauty."



STUDY OF A HEAD IMITATED FROM THE ANTIQUE.

(The Louvre, no. 384. See vol. i., p. 2.)

These two pictures have disappeared and left no trace. Some annotators of Vasari have thought the second was to be identified with a picture in the Düsseldorf gallery, but that is a delusion.

Never before had Leonardo made worse use of his great gifts than now, never before had he failed so completely to concentrate his powers. In saying this I mean simply to state a fact, not to make a reproach. Who, indeed, has the right to call a master desultory and slow, whose

smallest production implies a mental energy twenty times greater and a hundred times more fertile than the whole life-production of the great majority of his colleagues and rivals?

In Rome, the chemist and physicist completely eclipsed the painter. At one time we find Leonardo writing a paper on the striking of coins for the Pope's mint,<sup>1</sup> at another he is trying experiments in what may be called the comic side of physics. He gave himself up, says Vasari, to innumerable follies of the latter kind, trifling with mirrors, and making all sorts of strange experiments, in the desire to find oils for painting and varnishes with which to preserve pictures.

Vasari speaks of mirrors, and in a letter published by Dr. Richter our hero returns more than once to the same subject. Is he not referring to those burning mirrors in which at one time he took so keen an interest, and may we not refer to his stay in Rome the execution of the numerous drawings in which experiments of this class are recorded

These researches into the properties of mirrors and into questions of mechanics, brought Leonardo into conflict with two Germans, the one a mechanic and locksmith, the other a looking-glass maker. The former, whom we find at one time making files, screws, and winders for silk, at another cleaning muskets, had been taken into the service of Giuliano de' Medici at the same time as Leonardo, but at about one half the latter's salary. In a long letter, addressed, apparently, to Giuliano, of which more than one rough draft still exists, Leonardo pours out bitter complaints against this person, whom he qualifies as a swindling German—"ingannatore Tedesco." He accuses him of having invited him, Leonardo, to share his board and lodging in order that he might spy upon him continually. The "Tedesco"—cunning fellow that he was!—was taking lessons in Italian, which cost him little or nothing; in that direction he had everything to learn, for in the beginning he could only talk to Leonardo with the help of an interpreter. Not a very serious crime, one would think! Leonardo must have been rather short in the temper to waste time over such complaints. The absurdity of his reproaches is proved by the fact that immediately afterwards he accuses his fellow-lodger of preferring

<sup>1</sup> Richter, vol. ii., p. 17-18.

to dine at the table of the Pope's Swiss Guards, and to go bird-catching among the ruins of ancient Rome ("per queste anticaglie"). But the Tedesco's misdeeds did not stop there. Is he not accused of wishing to turn away from the door such of Leonardo's intimate friends as tried to penetrate to his studio? Does he not demand that wooden models of the instruments he has to make in iron should be provided for him, models which he no doubt intends to carry off into his own country?

The other German, a certain Giovanni, or Hans, maker of mirrors, also made himself obnoxious to Leonardo by his curiosity. He wandered incessantly into his studio, trying to see what he was about, so that he might criticise him out of doors. Moreover, he corrupted his fellow-countryman, the mechanic, partly to revenge himself upon Leonardo, who had—so he said—caused him to lose the favour of Giuliano, partly because he coveted the mechanic's room as a workshop for himself.

In another letter, and one very difficult to construe, Leonardo seems to make allusions to this same Giovanni Tedesco. He says that a certain person—"questro altro"—had interfered with his anatomical studies by finding fault with his dissections, in the Pope's presence and at the hospital. (That the Papal Court should have scruples on such a subject is intelligible enough.) But this was only the beginning of the misdeeds of this particular persecutor. Had he not filled the Belvedere with workshops for mirror-makers? Had he not taken possession of Maestro Giorgio's room for the same purpose? Had he not declared that eight ducats "per mensem" had been promised to him, and that payments should have begun from the day when he set out for Rome, or at least from the day on which his conversation with the addressee of Leonardo's epistle (Giuliano de' Medici) had taken place? At last we reach the capital offence of all: the ill-doer in question showed himself but rarely in his workshop! As he is a needy man, Leonardo proposes that he should be held to his work by giving up payment by time—by the month—for payments by the piece.<sup>1</sup>

One of the most tantalising questions—and how many there are the

Richter, vol. ii., p. 407-410.

reader already knows—suggested by the work of Leonardo, is that of the origin and date of the wonderful mural picture in the Roman convent of Sant' Onofrio, on the Janiculum. Until quite recently connoisseurs were united in ascribing this free and vivacious performance to the master himself, and that in spite of a certain want of suavity in the conception.<sup>1</sup> During the last few years, however, it

has been claimed for one or another of his pupils, most frequently for Boltraffio.



MADONNA AND CHILD, BY BOLTRAFFIO.  
(Poldi Pezzoli Collection, Milan.)

Let us look fairly at the data. It is incontestable that the Sant' Onofrio fresco approaches closely to the Milanese manner of Leonardo when the Florentine master first came in contact with the old Milanese painters, Foppa and Zenale.<sup>2</sup>

I may be met with the objection that Leonardo visited Rome for the first time in 1504 or 1505, so that he could

not have been the author of a work which dates from some twenty years before. Such criticism is both petty and false! Because we

<sup>1</sup> "As for the Sant' Onofrio picture of the Virgin and Child with a donor, admirable as it is, it shows a certain hardness and dryness in the drawing of the Infant's arms, and I cannot think it was painted at this time, and so should be disposed to believe that Leonardo had paid a visit to Rome in his youth." (Mündler, *Essai d'une Analyse critique de la Notice des Tableaux italiens au Louvre*, 1850, p. 113.)

<sup>2</sup> Under the portico of the basilica of S. Ambrose, at Milan, a bas-relief is let into the left-hand wall which seems to me to be connected with the Sant' Onofrio picture. It is dated "24 Martii, 1477." It contains three figures, a kneeling donor, the Virgin in a free though rather affected pose (her type, on the other hand, is poor and hard) and the Child, whose attitude is also well understood and free. The whole shows striking analogies with Leonardo's composition.



have no documentary evidence of any such voyage, are we to tie ourselves down to the belief that Leonardo, in his youth, never traversed the few leagues of road which divided Florence, or Milan for that matter, from the Eternal City? Are we to say that because no "procès-verbal" was drawn up and attested before a notary, that no such excursion—it was little more—had ever been made? That would be a strange way of using documents and interpreting the silence of archives!

In default of other documents, let us see what the master's drawings have to say. They will perhaps allow us to look a little more deeply into the question. In the first place we find in the collection at Windsor Castle a drawing in red chalk which shows us, twice over, the Child Jesus, seated, and bending towards an invisible donor. According to some connoisseurs this is a study for the Child Jesus in the Madonna of



TYPE OF THE VIRGIN IN THE SCHOOL OF LEONARDO.

(Bonnat Collection, Paris.)

Sant' Onofrio. One of the two figures bears a real likeness, especially in the lower part of the body and the position of the limbs, to the Roman fresco. The only difference is in the action of the arms. But we must be sure of the authenticity of the Windsor drawing. Doubts have been thrown upon it by Morelli, who here sees the hand of Cesare da Sesto, and that although he ascribes the fresco itself to Boltraffio!

For my part, I confess that Leonardo's hand does not seem to me

conspicuous in these two studies. They are too facile, almost too frivolous. The most we can admit—and I do not like venturing upon such hypotheses—is that they may have been copied from originals by the master. In any case, they do not date from 1485, but from about 1515.

M. Bonnat possesses a drawing in which we may recognise a study, with slight variations, for the Infant Christ. It differs from the fresco in that the Child's left hand lies upon the cushion which supports its body, while in the painting it is extended; the right foot, which lies upon the cushion, hangs free in the fresco; finally, the left foot keeps the Child's body in its place against the cushion in the drawing, while in the fresco it rests very gently against the Virgin's robe. This drawing has vastly more firmness than the one at Windsor; it is not unworthy of the master. The Infant Christ of the sketch for the *Madonna del Gatto* in M. Bonnat's collection (see above, p. 188) foreshadows that of the Madonna of Sant' Onofrio. Seated on his Mother's lap, he has drawn his left leg up, leaving the right to hang. His right arm is stretched out on the opposite side.

Let us turn to the painting itself. Towards the centre sits the Virgin, a half-length figure. She smiles upon her Infant, who raises his right hand to bless the donor. The type reminds us of Boltraffio's Virgin in the Poldi-Pezzoli Museum, which does not mean, however, that Boltraffio's claims to the authorship of the Sant' Onofrio fresco are beyond dispute. The Mother's two hands—the one resting lightly on her drapery, in which a single finger is engaged, the other raised in a gesture full of ease and grace—are ready to support the "bambino" in case of accident. The features of Mary are as full of careless happiness as those of the Child are grave beyond his years. His countenance has a certain archaic hardness about it, and he concentrates all his attention on the act of benediction. The kneeling donor, cap in hand, offers another contrast by his gravity to the sovereign grace of Mary. His head is modelled with consummate art. In motive and certainty of execution this portrait differs very widely indeed from the donors introduced by Boltraffio into the *Madonna della Casa Casio* of the Louvre.



*Study for the Infant Jesus in the "Madonna of Saint Onofrio."*

(STUDY FOR THE INFANT JESUS IN THE "MADONNA OF SAINT ONOFRIO.")



Printed by Draeger, Paris.



Shaken though I am in my original conviction, I hesitate to finally erase this admirable creation from the catalogue of Leonardo's works. I hesitate still more to place it in the year 1515, instead of about 1485. It shows, in fact, undeniable traces of archaism, to which no doubt it owes some of its charm.

One might, moreover, turn against the partisans of Boltraffio the weapon they have directed against Leonardo. Where are we to lay our hands on a document to prove that his gifted but unequal disciple visited Rome in or about 1515, and worked at the convent of Sant' Onofrio?

However this may be, the picture is so penetrating in its charm, its grace and freedom are so exquisite, that its conception can only be due to Leonardo. If he himself did not paint it—which remains to be proved—it must have been to his immediate supervision, or rather to the presence of a cartoon elaborated by his own hand, that the convent of Sant' Onofrio owed the surpassing beauty of its *Madonna*.

Leonardo's stay in Rome seems to have been interrupted by several excursions. On the 25th of September, 1514, we find him at Parma;<sup>1</sup> but he was soon back on the Tiber, as we gather from a letter addressed to his brother Giuliano by his sister-in-law Lesandra (Alessandra) on the 14th of December. Writing from Florence to Rome, Lesandra charges her husband to recall her to the recollection of Leonardo, an unique and most excellent man—"Mi rachomandiate a votro fratello Leonardo, uomo eccellentissimo e singularissimo."<sup>2</sup>

Leonardo did not wait for the departure of his patron Giuliano before quitting the Eternal City. Giuliano, as we know from Leonardo himself,<sup>3</sup> left Rome on the 9th of January, 1515; on the same day—the painter adds—the King of France died.

On the 9th of December, 1515, at the latest, Leonardo again found himself in Milan, for on that day he wrote to his bailiff

<sup>1</sup> Richter, vol. ii., p. 247.

<sup>2</sup> Uzielli, 1st ed., vol. i, p. 198-199. Uzielli throws some doubt on the authenticity of this letter.

<sup>3</sup> "The Magnifico Giuliano de' Medici left Rome on the 9th of January, 1515, just at daybreak, to take a wife in Savoy" (Richter, vol. ii., p. 417).

("castaldo") Zanobi Boni, to point out, for the benefit of the Fiesolan vineyards, certain improvements in the making of wine.

Did Leonardo take part in the competition set afoot by Leo X. for the façade of San Lorenzo, at Florence? Nothing is more unlikely. Not only did he never do anything to recommend himself as an architect to the Pope; he had even quitted Rome and Florence for the north before 1516, when the competition began.

This was the last time he ever set foot in his native city.



HEAD OF AN OLD MAN.

(Windsor Library.)





STUDY OF PLANTS.  
(Windsor Library.)

## CHAPTER VIII

LEONARDO TAKES SERVICE WITH FRANCIS I.—HE TRAVELS TO FRANCE—  
LEONARDO'S DEATH—HIS PORTRAITS—HIS PUPILS—HIS INFLUENCE.



HEAD OF AN OLD MAN.  
(Windsor Library.)

MEANWHILE, on September 13 and 14, 1515, Francis I. had won the victory of Marignano, and on the 16th of the following October<sup>1</sup> he made his triumphal entry into Milan. This time again Leonardo stood in the forefront of those who had assembled to greet the rising sun. A true precursor of Vaucanson, he constructed, at Pavia, a lion, which made several steps forward, and then the creature's breast opened, to display a wealth of lilies<sup>2</sup>—an ingenious

allusion, which shows how skilfully our artist could put on the courtier when necessary.

From Milan Francis I. proceeded to Bologna, where Pope

<sup>1</sup> Beltrami, *Il Castello di Milano*, p. 227.

<sup>2</sup> Vasari tells the story in connection with Louis XII. ; Lomazzo in connection with Francis I. (*Trattato*, vol. ii., chap. i.)

Leo X. awaited him. Leonardo probably followed close on the King's heels. (He can hardly have been at Bologna on the 11th or 12th of December, the date of the French King's arrival in the city, for we know him to have been at Milan on the 9th.)

One thing is certain, that at some moment the "maestro" painted the portrait of "Messire Artus, master of the king's chamber"—a bald and beardless old man, with a hooked nose and projecting chin.<sup>1</sup> The inscription on this picture, later by several lustres than the work itself, is worthy of quotation.<sup>2</sup>

To the same period, if I mistake not, belong those heads of strange-looking old men, of which Leonardo has left us such a large variety. Their resemblance to the portrait of *Messire Artus* warrants this assertion.<sup>3</sup>

On December 22 Leo X. was back at Florence, and Francis I. was journeying to his own dominions. From that time onward Leonardo does not seem to have ever left the victor of Marignano. Giuliano de' Medici was still alive indeed (he died at Florence on March 17, 1516), but the artist had quitted his service some considerable time before.

The idea of youth is so closely connected with the radiant genius of Leonardo, that it seems to affect every part of his long career. While no master ever suffered less from the uncertainties and disappointments of his earlier days, none assuredly ever knew less of the weakness and failure of old age. The freshness of his impressions, the vivacity of his style, the eternal smile which he wore till the very last, would make us fancy he was never more than twenty,

<sup>1</sup> Amoretti, p. 109. Georli, pl. xxxii. (formerly pl. xii.).

<sup>2</sup> "Ritratto di M. Artus, maestro di camera del Re Francesco I. nella giunta con Pp. L. x., il quale, negandogli l'unione con le sue arme che aveva impegnate col Re di Napoli per molti anni, lo compiacque di fargli subito il fratello Cardinale."

<sup>3</sup> This head of Artus (turned slightly to the right in the drawing in the Ambrosian Library) re-appears almost line for line in a drawing in the Royal Library at Turin (pl. xv.), but this time full face. Another drawing at Turin (pl. xvi.) of a beardless old man, in profile, seated, seems to me to be connected with the second profile drawing in the Ambrosiana (Gerli, pl. xxxiii.), except that the chin is less determined. The same old man re-appears in the Windsor Library Collection.

just as his rival and enemy, Michelangelo, seems always to have been sixty. It is as hard to imagine Leonardo aged, gloomy, and infirm, as to conceive Michelangelo young and gay. When more than sixty years have passed over his head, he resolves with a cheerful heart to cross the Alps, convinced he will be able to satisfy all the fancies of the young and eager king. But a few days before his death we see him still collecting notes, with all the eagerness of youth. What for, ye gods? unless it were to act upon them in the next world!

May we not take Leonardo as the incarnation of the Renaissance, with all its generous aspirations, the personification of that spring-tide of human intelligence, crushed in the blossom by religious struggles, even as Michelangelo personifies the spirit of revolt, the melancholy and the pain of belief, threatened by science, and of morality, sacrificed by artists and scholars, who paid an all too complaisant court to tyranny?

Francis I. showed his desire to honour the greatness of the master by bestowing a princely revenue upon him—700 crowns, about £1,400. This fact is attested by Benvenuto Cellini, who boasted, at a later date, that he had been granted a like sum. But let us leave the great goldsmith and writer to speak for himself. After relating that he has acquired a copy of Leonardo's treatise on the three great arts, he adds that, "as that great man's genius was as vast as it was varied, and as he had a certain acquaintance with Greek and Latin literature, King Francis, who was violently enamoured of his great talents, took so great a delight in hearing him argue, that he only parted from him for a few days in the year, thus preventing him from putting the splendid studies, which he had carried on with so much discipline, to actual use. I must not fail to repeat the words concerning him which I heard from the king's own lips, when he spoke to me, in the presence of the Cardinal of Ferrara, the Cardinal of Lorraine, and the King of Navarre. He affirmed that never any man had come into the world who knew so much as Leonardo; and that not only in matters of sculpture, painting, and architecture, for in addition, he was a great philosopher."

A few words concerning Francesco Melzi, Leonardo's faithful companion, the only one of his pupils who followed him abroad, will not be inappropriate here.

Melzi belonged to a noble family of Milan, where he was born (we believe) in 1498. (He was therefore only twenty years of age when his master died.) He cultivated painting as an amateur, rather than as a professional. Lomazzo speaks with special praise of his talent for miniature painting.<sup>1</sup> After Leonardo's death he returned to his own country, where he lived many years (he died after 1568), but

without producing any artistic work—as if the loss of his beloved master had broken all his powers. Possibly his leisure was employed in the arrangement of the manuscripts bequeathed to him by Leonardo. His name appears, at all events, on the copy of the *Trattato della Pittura*, in the Vatican Library. (See vol. I p. 231.)



SKETCH OF A KNIGHT.

(Library of the Institut de France, MS. I.)

Till quite lately critics have ascribed the *Vertumnus and Pomona*,<sup>2</sup> in the Berlin Museum, to Melzi's brush. But Herr Bode has traversed this attribution, and attributes the picture to some obscure artist.<sup>3</sup>

Authentic works by Melzi having almost disappeared, I will confine myself to pointing out the fact that the heroine in this picture (a young woman seated under a tree, with a basket of flowers and fruit) is of the most pronounced Leonardesque type. Standing close beside her, touching her shoulder, is an old woman (Vertumnus), leaning on a stick. In the background is a range

<sup>1</sup> *Rime*, fol. 112, Milan, 1587. See also *L'Arte del Minio nel Ducato di Milano*, by the Marchese d'Adda; Milan, 1886, p. 65-67.

<sup>2</sup> There is a study for Pomona's foot in the Windsor collection, from which Waagen inferred that this picture might be ascribed to the master himself. (*Treasures of Art in Great Britain*, vol. i. p. 442.)

<sup>3</sup> *Gazette des Beaux Arts*, 1889, vol. i. p. 498-500.

of curious jagged mountains. The Pomona is very elegant, and has Leonardo's characteristic smile. The bare shoulders, arms, and feet are modelled with infinite care. The work is soft and effeminate, but it has a certain charm.

The only really authentic work by Melzi now in existence is a small portrait, in red chalk, in the Ambrosian Library. It represents an old man, beardless and bald, in profile to the right. The ear is too small, and set much too high, and there is a certain timidity in the handling. The inscription: "1520 Adi 14 Augusto p<sup>a</sup> cavata de relevo. Io Francescho da Melzo di anni 17," and in the same hand, lower down, ("anni 19, Fr. Melzo,") puts us in a serious difficulty. For if Melzi was really born in 1498, he would have been twenty-two, and not eighteen, in 1520.<sup>1</sup>

Rosini has published, as Leonardo's work, a portrait of Melzi—a bust, in profile to the right, with bare neck and long hair curled and waved, bound with a wreath of oak leaves; the edge of a tunic and the guard of a sword just appear.<sup>2</sup> Needless to say, the picture in question has nothing to do with the master.

The residence assigned to Leonardo was the good town of Amboise, the cradle of the first colony of artists summoned to France by Charles VIII., and the favourite dwelling-place of the young reigning monarch. There a great part of his youth had been spent; there, in the first year of his reign, he had celebrated the betrothal of Renée de Montpensier with the Duke of Lorraine; there, between 1515 and 1517, three of his own children had been born.<sup>3</sup>

<sup>1</sup> Ch. Ravaisson-Mollien. *Bulletin de la Société des Antiquaires de France*, 1887, p. 125, reproduced (reversed) by Gerli (pl. xiv.), photographed by Braun (no. 54).

<sup>2</sup> *Storia della Pittura*, vol. iv., p. 257.

<sup>3</sup> *La Touraine historique et monumentale, Amboise*, p. 410-429. Tours, 1897. The little chapel attached to the manor house of Cloux contains several pictures which have



SKETCH OF A KNIGHT.

(Library of the Institut de France, MS. I.)

We know that Francis I. was at Amboise, amongst other periods, from September 3 to September 19, from November 4 to November 29, from December 5 to December 28, in 1516; on January 1 and 2, and from December 13 to 31 in 1517; and from January 3 to March 31, in 1518.

Leonardo was assigned the little manor house of Cloux, standing between the Castle and the town of Amboise.

This residence, built by Etienne le Loup, steward of Louis XI., had been bought, in 1490, with all the lands attached to it, by Charles VIII. for the sum of 3,500 gold crowns. It had afterwards passed into the hands of the Comte de St. Pol; thence into those of the Duc d'Alençon, and finally, into the possession of Queen Louise de Savoie, mother of Francis I. The manor house, now known under the name of Clos-Lucé, has been tastefully restored. It is at present the property of M. G. Saint-Bris.<sup>1</sup>

"The house, built of brick and white stone, has a sunny aspect, and is sheltered on the north by the hill. It consists of two *corps de logis*, forming a square. In the inner angle of this square rises an elegant winding staircase, of octagonal shape." "Leonardo," says Anatole de Montaiglon, from whom I borrow this description, "has leaned on the window-sills of the two storeys, his feet have trodden the staircase, his step has passed through all the eight large rooms of which the dwelling is composed; and in the quiet house, which has not altered, externally at least, since those days, we can imagine we see him yet." We are assured that the room in which he breathed his last is still in existence, with its raftered ceiling, its huge hearth, and its general aspect of austerity.

The aged and illustrious painter described his residence as a palace. "June 24, S. John's Day," (a feast dear to every Florentine heart!) "1518, at Amboise, nel palazzo del Clli. (sic)" is the entry in his own hand in one of his note books (Richter, vol. ii. p. 417).

been occasionally attributed to Leonardo (a *Visitation*, a *Virgin and Child*, an *Assumption*). Arsène Houssaye fancied he recognised through the repaints in the head of a *Madonna*, an angel's head by Melzi, or some Milanese artist. The Marquis de Laborde, however, considers that none of these works bear the slightest resemblance to Leonardo's manner, and even believes them to belong to a period much earlier than that of his residence at Amboise. (*La Renaissance des Arts à la Cour de France*, vol. i., p. 196.)

<sup>1</sup> *Réunions des Sociétés des Beaux Arts des Départements*, 1893, p. 784.



*“Saint John the Baptist.”*

( 18 12 1888 )





Printed by Dræger, Paris.



He was in the immediate vicinity of the Court, and few great personages passed through Amboise without paying him a visit.

On October 10, 1516, the Cardinal of Aragon, natural son of Ferdinand I., King of Naples, visited Leonardo, attended by his suite. His secretary, Antonio di Beatis of Amalfi (all honour to him!), carefully noted down the details of this interview. He tells us that the master showed the prelate three pictures: a female portrait, ordered from him by the late Giuliano de' Medici, a *S. John the Baptist as a Youth*, and a *Madonna with the Child on the Lap of S. Anne*, all three of them very perfect. "Unfortunately," adds the narrator, "a sort of paralysis which has affected his right hand, forbids our expecting more good work from him. It is true that he has formed a Milanese pupil of his, who works exceedingly well; and although the said master, Leonardo, cannot paint with the delicacy which was customary with him, he still busies himself in making drawings, and instructing others in his art."<sup>1</sup>

The wonderful little *S. John the Baptist* in the Louvre is certainly one of Leonardo's last works. It is a proof that his noble intelligence was constantly rising higher, and that the flame burnt brightest just before it was finally quenched.

A vision—a dream—a kind of impalpable image of a head and arm, rising out of a mysterious penumbra—such is this enchanting

<sup>1</sup> Uzielli, *Ricerche intorno a Leonardo da Vinci*, 1st edition, vol. ii. p. 460. I here reprint this invaluable document: "Alli 10 de ottobre (1516) da Tursa. . . se andò ad Amboys. . . In uno de li borghi il Signore (the Cardinal of Aragon) con noi altri andò ad vedere Messer Lunardo Vinci, fiorentino vecchio di più de LXX. anni pictore in la età nostra excelentissimo quale mostrò ad sua S. Illma (the Cardinal) tre quatri. Uno di certa donna fiorentina, facta di naturale ad istantia del quondam Magnifico Giuliano de Medici. L'altro di San Joanne Baptista giovane, ed uno de la Madonna et del figliolo che stan posti in gremmo di Sancta Anna, tucti perfectissimi. Ben vero che da lui per esserli venuta certa paraleisi nella dextra non se ne può exspectare più cosa buona, ha ben facto un creato milanese che lavora assai bene, et benche il preducto Messer Lunardo non possa colorire con quella dolcezza che solea pur serve ad fare disegni ed insegnare ad altri. Questo gentilhuomo ha composto di notomia tanto particolarmente con la dimostrazione di la pictura si de membri come de muscoli nervi vene giunture d'intestini et di quanto si può ragionare tanto di corpi de huomini come di donne, de modo non è stato mai ancora facto da altra persona. Il che habbiamo visto oculatamente et già lui disse haver facto notomia de più de xxx. corpi tra mascoli et femmine de ogni età. Ha anche composto de la natura de l'acque. De diverse machine et altre cose, secundo ha referito lui infinità di volumi, e tucti in lingua vulgare quale se vengono in luce saranno profiqui e molto delectevoli."

picture. So delicate and tender are the features that the artist must certainly have taken them from a female model, imitating, in this particular, several of his Florentine predecessors, and, notably, Donatello, and Agostino di Duccio, the sculptor of the church of S. Francis, at Rimini. These two artists seem to have taken delight in modelling androgynous figures. On representations of S. John, the patron Saint of Florence, the Primitives, from Donatello downwards, lavished every seduction of their art, every skilful caress, as it were, of brush or chisel. For the ascetic type of him who lived on locusts and wild honey, they substituted a beautiful beardless youth, starting out on his desert journey, full of hope and pleasurable expectation. The delicate modelling of the arm and raised hand, in the Louvre picture, defy all description. The expression of the face, with its exquisite smile and airy grace, is ineffable, to say nothing of the miraculous execution of the picture, and the knowledge of chiaroscuro, so profound that Rembrandt seems to have borrowed its secrets from Leonardo. Compare the two painters' methods. They are identical—to bring a figure into relief against the penumbra of the background, and make it participate in the mysterious illumination. In this particular, the *S. John the Baptist* and the *Night-Watch* are twin works, in so far as idealism and realism can resemble one another.

Of all the painters who came after Leonardo, Rembrandt is, in fact, the one who approaches nearest to him, both in his indecision as regards literary painting and really plastic formulæ, and his magic treatment of chiaroscuro.

Some short time after this visit, the masterpiece passed into the collection of King Francis I; Louis XIII. presented it to Charles I. of England, in exchange for Holbein's *Erasmus*, and a *Holy Family* by Titian. It was bought by Jabach at the sale of Charles I.'s pictures, for the ridiculously small sum of £140, and was made over to Louis XIV. by the famous banker. Since that time it has remained in the national collection.

The aged artist had to face more than one disappointment. The first of these was owing to the unprepared condition of his foreign hosts and neighbours. Why should we hesitate to admit the fact? France

was not ripe for the teaching, artistic or scientific, of this pre-eminent representative of the new school of thought, and the influence which the gifted leader should have exercised on French art in general, and the artists of Touraine in particular, was reduced to little or nothing. The time was past when the valiant chief of the School of Tours, Jehan Foucquet, had gone to Italy, to assimilate the conquests of the Renaissance. Flemish influence, and still more a kind of inertia, had laid a paralysing hand on our French painters. Leonardo was too worn out to resume, among insufficiently prepared pupils, a work of initiation which, in his hands, would have been crowned with very different success from that it earned in those of such decadent artists as Il Rosso, Primaticcio, and Niccolo dell' Abbate. But we have no proof, indeed, that the French painters felt themselves at all attracted by a style which was far too transcendent for their commonplace natures.



THE MANOR HOUSE OF CLOUX, AMBOISE.

Not that the master's reputation had failed to reach the banks of the Seine, the Loire, and the Rhone. So early as 1509, Jean Lemaire had done homage in *La Plainte du Désiré* to "Léonard qui a grâces supernes." But the very superiority of his genius discouraged his new fellow-citizens, and divided them from him.

Among the few French artists who were influenced more or less directly by Leonardo, the place of honour must be allotted to the engraver Geoffroy Tory, of Bourges. In his *Champ Fleury* (1529), he speaks of the Italian artist in terms of high praise.

A collection of drawings by a French artist who lived about the middle of the sixteenth century, which has recently passed with M. Lesoufaché's collection into the Library of the École des Beaux Arts, also shows traces of Leonardo's influence. Some studies of horses, in spirited attitudes, were certainly inspired by the *Battle of Anghiari*.<sup>1</sup>

On the other hand, a reproduction of the drawing, now in the Windsor Library (a replica in the Louvre), of a man defending himself against wild animals by means of a burning glass (p. 57), has been wrongly attributed to the engraver Jean Duvet. Passavant claims this work for Cesare da Sesto, and Galichon ascribes it to an unknown Milanese engraver, probably a goldsmith.<sup>2</sup>

Francis I., as we know by Leonardo's certificate of burial, had engaged his services, not as his painter only, but as his engineer, architect, and mechanic.

As an engineer, Leonardo was soon at work. One of his most important undertakings was the plan for digging a canal near Romorantin, at the confluence of the Sauldre and the Morantin. This canal, which was to be partly fed by the waters of the Cher, was to be used both for irrigation and navigation. The impounding locks, which he introduced into this plan, and on which he had lavished all his care, were then, according to M. Kucharzewski,<sup>3</sup> a great novelty in France, where navigable canals did not come into vogue until the reign of Henri IV. "Nowadays," adds M. Kucharzewski, "there are more than two thousand of these locks on the network of canals that covers the country, and their invention has long been ascribed to Leonardo da Vinci."

Leonardo was much interested, on the occasion of an excursion to Blois, in the canal and irrigation works carried out there, some twenty or five-and-twenty years previously, by his fellow-countryman Fra Giocondo, the learned Veronese monk.<sup>4</sup>

<sup>1</sup> See *Chronique des Arts*, June 15, 1895.

<sup>2</sup> *Gazette des Beaux Arts*, 1865, vol. i., p. 547-550. M. Julien de la Boullaye (*Etude sur la Vie et sur l'Œuvre de Jean Duvet dit le Maître à la Licorne*; Paris, 1876, p. 124-125) does not give an opinion on this point.

<sup>3</sup> *Revue scientifique*, August 22, 1885, p. 244.—Cf. Ravaisson-Mollien, and Richter, vol. ii., p. 251-255.

<sup>4</sup> A plan published by Richter (vol. ii., p. 250) bears the following note: "C. D. Giardino di Blès, A. B. è il condotto di Blès, fatto in Francia da Fra Giocondo."

In connection with this residence in Touraine, we have a sketch which is evidently the plan for a house to be built beside the road leading to Amboise, with a huge hollowed out space near it, surrounded by tiers of seats for spectators.<sup>1</sup>

Leonardo also seems to have collected information as to the conditions of the tide at Bordeaux.<sup>2</sup>

Did woman claim any share in the latest thoughts of the aged artist? A passage in his will would almost lead us to think so. Amongst his legatees is a poor woman of the humblest sort, a servant, old and ugly, in all probability. "Item, I leave my servant Mathurine a gown of good black cloth, trimmed with fur, a cloth cloak, and two ducats, to be paid her once only, and this also to reward the faithful service of the said Mathurine, until this day."

Had the illustrious painter, natural child as he was, unmarried, unencumbered by family ties, ensured himself the possession of some obscure and absolute devotion, like the devotion of a watch-dog? Had some fellow-countrywoman of his own carried her self-sacrifice to the point of following him into a foreign land? For a moment I had hoped and almost believed it. But, alas! the name of Mathurine has a terribly French ring about it! The clause in the will refers, no doubt, to some prosaic housekeeper, belonging to the province, whom Leonardo had taken into his service when he settled at Amboise. Thus, to his latest hour, the artist who created so many and such matchless female types—virgins, mothers, matrons, prophetesses and sibyls—seems, by some strange contradiction, to have banished the sex from his own inmost existence, and denied it all communion with the sublime secrets of his thoughtful and poetic soul.

This independence of all female affection explains the ease with which the master moved from one home to another, leaving Florence for Milan, and Milan for Florence, following the fortunes of Cæsar Borgia, of the Maréchal d'Amboise, of Giuliano de' Medici, of Francis I. of France, and venturing, at last, when over sixty years of age, to try his fortune beyond the mountains.

But Leonardo's health had been declining for some considerable

<sup>1</sup> Richter, pl. lxxxi., fig. 2.—De Geymüller, *Les derniers Travaux sur Léonard de Vinci*, p. 43. As to the design for Marshal Trivulzio's monument, said to have been made at this period by Leonardo, see vol. i., p. 156.

<sup>2</sup> Richter, vol. ii., p. 250.

time already. The numbness or paralysis which affected his right hand was but the premonitory symptom of worse troubles. The noble old man thought it well to make his last arrangements. The fine maxim he had himself composed: "As a well-spent day ensures happy slumbers, so does a well-spent life ensure a happy death,"<sup>1</sup> might have been appropriately applied to his own case. A week before the final catastrophe he sent for Maître Boreau, an Amboise notary, whose descendants carried on his business till 1885, and dictated his will to him.

The original will is lost; but M. Scribe, a professor at the college of Romorantin, has recently had the good fortune of finding an old copy of the Italian text, dating from the seventeenth century, and bearing every sign of scrupulous exactitude.<sup>2</sup>

This copy enables us, in the first place, to solve a serious chronological problem. The will is dated April 23, 1518, and it was a question whether the year was to be reckoned on the Italian system (at Rome, for instance, it began on December 25, and sometimes on January 1), or on the French one—that is to say, from Easter. Only a few years ago, Signor Uzielli contended that 1518 was the correct date.<sup>3</sup>

The learned Turinese professor overlooked the fact that in the will the date was preceded by the words "before Easter." In the notice prefixed by Anatole de Montaiglon to M. Scribe's publication, this valuable entry is not allowed to escape reference. In 1518, Easter Day fell on April 4. In 1519, it was on April 24.<sup>4</sup> The correctness of this latter date is therefore definitely established.

Here is the translation of the will, as it appears in the Italian copy discovered by M. Scribe:—"Let it be known to all men, present and to come, that at the Court of our lord the King at Amboise, duly assembled in our presence, Messire Leonardo da Vinci, the King's painter, now dwelling at the place known as Cloux, near Amboise, considering the certainty of death, and the uncertainty of the hour of its approach, has acknowledged and confessed before us, in the said

<sup>1</sup> Richter, vol. ii., p. 293.

<sup>2</sup> *Réunion des Sociétés des Beaux Arts des Départements* (1893, p. 780, etc.).

<sup>3</sup> *Ricerche*, 1st edition, vol. i., p. 99.

<sup>4</sup> I borrow these dates from M. Giry's *Manuel de Diplomatie*, p. 102.—*Réunion des Sociétés des Beaux Arts*, loc. cit.



Court—to which he has submitted, and does submit himself, as to what he does and orders for the using of these presents—his will and the order of his last desires in the following manner.

First he commits his soul to our Lord God and Saviour, to the glorious Virgin Mary, to S. Michael, and to all the blessed Angels and Saints in Paradise.

Item, the said testator desires to be buried in the church of S. Florentin at Amboise, and that his body may be borne thither by the chaplains of that church.

Item, that his body may be attended from the said place to the said church of S. Florentin by the clergy of the said church—that is by the rector and the prior, or by the curates and chaplains of the church of S. Denis at Amboise, and with them the brothers of the minor orders in the said place; and before his body is carried into the said church the testator wills that three high Masses, with deacon and sub-

deacon, shall be celebrated in the said church of S. Florentin; and on the day when the three high Masses are said, thirty low masses of S. Gregory shall be said likewise.

Item, that in the said church of S. Denis the same service shall be celebrated (as above).

Item, that in the church of the said friars and minor orders the same service shall be celebrated.

Item, the undermentioned testator gives and grants to Messire

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A PORTRAIT OF LEONARDO. COPY FROM THE EXAMPLE IN PAOLO GIOVIO'S COLLECTION.

(The Uffizi, Florence.)

Francesco del Melzo, gentleman, of Milan, as a reward for the gracious service he has rendered him in the past, all and each of the books now owned by the said testator, and the other instruments and portraits connected with his art and painter's craft.

Item, the said testator gives and grants in perpetuity and for ever, to Battista di Villanis, his servant, one half of a garden outside the walls of Milan, and the other half of the said garden to Salai, his servant; within this garden the said Salai has built a house, which shall be and remain for ever the property of the said Salai, his heirs and successors. And this is to reward the faithful (and kindly) service rendered him by his said servants, Villanis and Salai.

Item, the said testator gives and grants to Mathurine, his woman servant, a gown of good black cloth, lined with fur, a cloth cloak, and two ducats, to be paid to her once only, and this in gratitude for the good service rendered him by the said Mathurine.

Item, he desires that at his funeral there may be sixty tapers borne by sixty poor persons, who shall be given money for carrying them, which money the said Melzo shall distribute to them according to his will. These tapers shall be divided between the four churches named.

Item, the said testator gives and grants to each of the above-mentioned churches ten pounds weight of thick wax tapers, which shall be placed in the said churches, to be used on the days of the celebration of the above-mentioned services.

Item, that alms be given to the poor at the Hôtel-Dieu and at S. Lazare d'Amboise, and that for this purpose the number and sum of seventy pence of Tours be paid to the treasurers of these confraternities.

Item, the above-mentioned testator gives and grants to the said Messire Francesco del Melzo, here present and consenting, the remainder of his pension, and of the sums of money owing to him up till the day of his death, by the receiver or treasurer-general, M. Jehan Sapin, and also of all and every one of the sums received by him from the said Sapin, in payment of his pension, in case the testator should die before the said Melzi, which last are at present in the keeping of the said testator, in the said house of Cloux, as he asserts.

Likewise he gives to the said del Melzo all his wearing apparel which he has here in the said place (at Cloux), as much to reward his good service up to the present as in return for the weariness and trouble this present will may cause him, all of which, be it clearly understood, shall be at the testator's cost.

He orders and desires that the sum of four hundred crowns, deposited by him in the care of the treasurer of Santa Maria Novella, in the town of Florence, be given to his natural brothers, residing at Florence, (together with) the interest on the four hundred crowns which may be due by the said treasurer to the said testator since the day on which the said testator gave and made them over to the said treasurer of Santa Maria Novella.

Item, the said testator desires and commands that the said Francesco del Melzo shall be and remain the sole executor of his will; and that the will may take its full and complete effect, the said Messire Leonardo, legal testator, has bound and does bind his heirs and successors, with all his goods, furniture and real estate, present and to come, to follow, hold, obey, and observe all that is therein set forth and set down, and has by this present deed renounced all other and contrary disposal of his property.

Given here at Cloux, in the presence of Master Esprit Fleri, curate of the church of S. Denis at Amboise, Master Guillaume Croyant, priest, and the knight Master Cyprien Fulchin, Brothers Francesco of Cortona, and Francesco of Milan, of the Minorite Friars at Amboise, called and summoned as witnesses thereof, by order of the said Court, in the presence of the said Messire Francesco del Melzo, agreeing and consenting, who has promised on his honour, and sworn an oath which he has delivered in his own person unto us, that he will never do, go, speak or act against it, and sealed, at his prayer, and as a sign of truth, with the seal-royal set upon the legal acts of the town of Amboise. Given this xxiii. day of April mdxviii. before Easter.

And on the xxiii. of the said month of April, 1518, in presence of Maitre Guillaume Boreau, notary royal at the Court of the Bailiwick of Amboise, Messire Leonardo da Vinci has given and made over, by his last will and testament, above recited, the rights over the watercourse of the Canal of S. Christopher in the Duchy of Milan,

formerly bestowed by the late King Louis XII. of happy memory upon the said Leonardo da Vinci, to the above-mentioned Master Battista di Villanis, to use in the manner and fashion permitted by the said King's gift. Before Francesco del Melzo, gentleman, of Milan, and myself.

And on the above mentioned day of the said month of April, in the said year 1518, the said Messire Leonardo da Vinci did, by his last will and testament, give to the above-mentioned Battista di Villanis (he being present and agreeing) each and every piece of furniture and utensil in his said house at Cloux, and this always in case the said di Villanis survives the above-mentioned Messire Leonardo da Vinci.

In the presence of the above-mentioned Messire Francesco del Melzo and of myself, notary, etc., BOREAU.

This document shows us that Leonardo's fortune consisted, at the time of his death, of the vineyard at Milan, the 400 florins deposited at Santa Maria Novella, his rights in the Canal of S. Christopher at Milan, and his yearly pension.

A codicil to the document is supposed to have existed, and Melzi's letter does certainly affirm that Leonardo bequeathed his little property at Fiesole to his brothers, a legacy which does not appear in the will itself. Melzi adds that he does not know whether or not there was another will (evidently of previous date).

The last surviving member of the Boreau family assured Arsène Houssaye that the will had been drawn up in French. This assertion is anything but improbable. Leonardo probably dictated it in Italian, for we have no reason to believe he acquired the French language during the few years he spent at Amboise. His two fellow-countrymen, who, with Melzi, were present at the drawing up of the instrument, Brother Francesco of Cortona, and Brother Francesco of Milan, doubtless translated his directions, as he gave them.

The will confirms Vasari's story in one essential point. "At last," writes the biographer, "Leonardo, growing old, fell sick for many months, and seeing death draw near, he desired to be carefully instructed concerning the things of our good and holy Christian and Catholic religion, and having made his confession and repented with many tears, he insisted, though he could not stand upright,

and had to be supported in the arms of his friends and servants, on leaving his bed to receive the most blessed Sacrament."

I may point out, parenthetically, that certain formulæ in the will, such as the commendation of the testator's soul to "Monseigneur S. Michel," a saint who was far more popular with Frenchmen than Italians, may very well have been the work of the notary, rather than of Leonardo himself. And further we may ask whether the arrangements made to ensure as much pomp as possible in the funeral ceremonies may not have been more a last flicker of worldly vanity than a sudden reawakening of religious sentiment.

"The King," Vasari goes on, "who often went to see him in the most friendly fashion, arrived at this moment; Leonardo, out of respect, raised himself up in his bed, explained the nature and changes of his illness to him, and told him, further, how much he had offended God and men by not using his talent as he should have

done ("non avendo operato nell' arte come si conveniva.") Just at this moment he was seized with a spasm, the forerunner of death; the King rose from his seat and took hold of his head to help him, and prove his favour to him, so as to comfort him in his suffering; but this divine spirit, recognising that he could never attain a greater honour, expired in the King's arms,



SUPPOSED PORTRAIT OF LEONARDO.  
(Windsor Library.)

at the age of seventy-five (sixty-seven) years, on May 2, 1519."

Modern critics agree in casting doubt on this anecdote, which sheds even more honour on Francis I. than on Leonardo, and which has been the subject of endless pictures, besides those of Ingres, Jean Gigoux, and Robert Fleury.<sup>1</sup>

In the first place, it is objected, Melzi makes no reference to the circumstance in his letter informing Leonardo's brothers of his master's death; in the second, Lomazzo asserts that it was Melzi who announced the death to Francis I., a proof that the monarch was not present; and further, the King was not at Amboise, but at S. Germain-en-Laye, as appears from a decree given in that place May 1, 1519. This last fact is the most convincing to me. Aimé Champollion, the Marquis de Laborde, and Arsène Houssaye maintain, however, that the decree in question may very well have been sealed by the Chancellor in the King's absence; and the fact of his absence on May 3, the day after that of Leonardo's death, is apparently established.

The real moral of Vasari's story has been brought out by Anatole de Montaiglon. The King, he says, was in the habit of visiting Leonardo when he was at Amboise. Why should not this kindness to a sick man, so eminently human in its character, be a fact? It may not have been Vasari who embroidered the story and touched up the dramatic effect. That may have been the work of those through whom it reached him.<sup>2</sup>

Thus died, full of years and glory, but far from his own land, the mighty genius who had carried the art of painting to its highest perfection, and had penetrated farther into the mysteries of Nature than any mortal since the days of Epicurus and Aristotle.

The burial took place at Amboise, in the cloister of the church of the Royal Chapter of St. Florentin, as we learn from the following document, discovered by M. Harduin:—"Fut inhumé dans le cloistre de cette église, Messire Lionard de Vincy, nosble millanais,

<sup>1</sup> Several sixteenth century authors (Dolce in *L'Aretino*, Lomazzo in *L'Idea del Tempio della Pittura*) report this anecdote. But they evidently only quote from Vasari, whose *Vite* appeared for the first time in 1550, and then again in 1568.

<sup>2</sup> *Réunion des Sociétés des Beaux Arts des Départements*, 1893, p. 787-788.

premier peintre et ingénieur et architecte du Roy, meschansischien d'estat, et ancien directeur de peinture du Duc de Millan. Ce fut faict le douc<sup>e</sup> jour d'aoust, 1519."<sup>1</sup>

Our country, which showed the artist so much hospitality during his lifetime—our country, which was the first to bring his *Trattato della Pittura* to the light, and which is to this day the proud possessor of the most extraordinary and rarest collection of his pictures and his manuscripts—this country of ours, I say, has not shown the respect that was their due to Leonardo's earthly remains.

The grave in the church of S. Florentin was so soon forsaken and forgotten that we, in these days, are ignorant of its whereabouts. The century which gave such gorgeous funerals to Raphael and to Michelangelo, seems to have paid no heed to the passing of their great rival, Leonardo.

A brilliant writer of our own period, Arsène Houssaye, full of zeal in the cause of art, devoted himself to the pious duty of discovering the bones of Leonardo da Vinci. He caused excavations to be made in 1863, on the site of the ancient church which had been destroyed in 1808, and a certain number of skulls were brought to light. Among these was one he thought was Leonardo's. But the document discovered by M. Harduin declares the artist was buried not in the church, but in the cloister. Thus the discovery of the gifted author of *Le quarante et unième Fauteuil* falls to the ground.

The faithful Melzi announced the sad event to Leonardo's family in words of deep feeling. His letter proves him to have possessed a noble heart :—

"SER JIULIANO AND HIS MOST HONOURABLE BROTHERS,—

"I think you are apprised of the death of Master Leonardo, your brother, and to me even as the best of fathers. I could never express the sorrow it has caused me; and as long as my limbs hang together, I shall suffer from it perpetually, and very justly so, because

<sup>1</sup> Piot's *Le Cabinet de l'Amateur*, 1863, no. 26. Arsène Houssaye and Uzielli have erred in contesting the authenticity of this document (*Ricerche*, 1st ed., vol. i., p. 99-100). The interval between the two dates (Leonardo's death, on May 2, and the burial, on August 12) is easily explained by the fact that there was first of all a temporary burial, followed on August 12 by the final ceremony.

he daily showed me a most devoted and most warm affection. All men have deplored the loss of such a man as this who is now no longer in life. May the all-powerful God give him eternal peace! He left this present life on the second day of May, with all the Sacraments of our Holy Mother the Church, and well prepared.

"As he held letters from the Most Christian King, which gave him power to leave and bequeath his possessions to whomsoever he chose, and this without "*eredes supplicantis sint regnicolæ*," and as without these letters he could not have made a legal will, and everything would have been lost, according to the custom here, at least as regards what is owned in this country: the said Master Leonardo made a will, which I would have sent you, if I had possessed a trusty messenger. I expect the arrival here of an uncle of my own, who will afterwards return to Milan. I will give it to him; he will be a good intermediary; and, besides, I have no other.

"As to what concerns you in the said will (if there be no other), the said Master Leonardo possesses, at Santa Maria Novella, in the hands of the Camerlingo, who has signed and numbered the receipts, 400 crowns, which are bearing interest at 5 per cent. On October 16 next there will be six years' interest due. There is also mention of a property at Fiesole, which he desires shall be divided amongst you. The will does not contain anything else which affects you. '*Nec plura*,' except that I offer you all I possess and all my powers, placing all my zeal and all my desires at the discretion of your will, and, with them, the continuance of my compliments.

"Written at Amboise, this first day of June, 1519. Send me a reply by the Gondi. (?) *Tanquam Fratri vestro, FRANCISCUS MELTIUS.*"

It might have been concluded that after Leonardo's death, the little Italian colony which had clustered round him would have scattered forthwith. But nothing of the kind occurred. The faithful Melzi continued to live at Amboise for some time, probably while he was putting his master's affairs in order. Battista di Villanis, Leonardo's former servant, and now his, kept the young man company. Almost four months after the great artist's death, on August 29, 1519, Battista, described as "*al presente servitore del nobile uomo Messire Francesco da Melzi*," sent authority from



Amboise to Hieronimo Melzi, to proceed as to the division of the vineyard, one half of which his master had bequeathed to him.<sup>1</sup>

No critical account of the portraits of Leonardo da Vinci has as yet been undertaken : Dr. Rigollot,<sup>2</sup> Arsène Houssaye,<sup>3</sup> Mrs. Heaton,<sup>4</sup> and, more recently, Signor Uzielli,<sup>5</sup> to whom we owe so many valuable discoveries, have been content to give us a list of half a score of portraits, without discussing the authenticity of any one of them.

In the absence of any drawing or picture of the creator of the *Last Supper* and *La Gioconda*, the sketches penned by contemporary writers might suffice to give us a tolerable idea of that pre-eminently brilliant and imposing countenance. One of these authors, Vasari, extols his beauty beyond all praise ("la bellezza del corpo non lodata mai abbastanza") and his air of splendour ("lo splendor dell' aria sua, che bellissima era").



IDEALISED PORTRAIT OF LEONARDO.  
(Windsor Library.)

Another, Lomazzo, speaks of the extreme length of his hair and beard and eyelashes, "he is the type," he avers, "of the true nobility of study, as were in former days the Druid Hermes, and the Prometheus of the ancients." "A third, an anonymous writer, tells us he wore, instead of the gowns then in vogue, a short, rose-

<sup>1</sup> Amoretti, *Memorie*.

<sup>2</sup> *Catalogue de l'Œuvre de Leonardo da Vinci*, p. 84-85.

<sup>3</sup> *Histoire de Leonardo da Vinci*, 2nd ed., p. 438-439.

<sup>4</sup> *Leonardo da Vinci*.

<sup>5</sup> *Ricerche*, 1st ed., vol. ii., p. 463-466.

coloured mantle, which fell to his knees, and that his carefully kept hair hung in long curls upon his shoulders.”<sup>1</sup>

Thanks to the exactness of these notes, we can imagine the appearance of the man who created so many masterpieces. His moral character is equally well known to us.

Let us conjure up the figure of a youth, grave and fascinating at once, a good talker, a celebrated improvisatore, a little fond, perhaps, of mystifying his audience, but eager, whenever he found himself alone, in his inquiries into the most knotty problems. Modesty was not exactly his strong point. The programme he laid before Lodovico il Moro proves that clearly. An extreme gentleness, an exquisite kindliness, fortunately tempered his legitimate confidence in his own powers. His patience with his pupils, one of whom, an ill-conditioned fellow, caused him endless trouble, was almost angelic. He showed tenderness even to unreasoning creatures, and would buy caged birds for the sake of the pleasure of setting them free.

Is there any picture of Leonardo as a young man? I would fain believe it. And yet I have sought in vain for any which might seem likely to be his portrait. Let us, while hoping some other inquirer may be more fortunate, content ourselves with the studies by the master's own hand, which represent him in his riper manhood and old age.

The earliest of these, a red chalk drawing in the Windsor Collection, is a bust in profile.

We see a man of fifty, or thereabouts, with regular, but singularly cold features, an observer rather than a poet. The nose, and the forehead, on which the hair is a little scant, are straight, the moustache is clipped short, giving the face rather a hard and severe look, the hair and beard are carefully waved. This portrait is believed to be that mentioned by Vasari as belonging to Leonardo's favourite pupil, Fr. Melzi.<sup>2</sup>

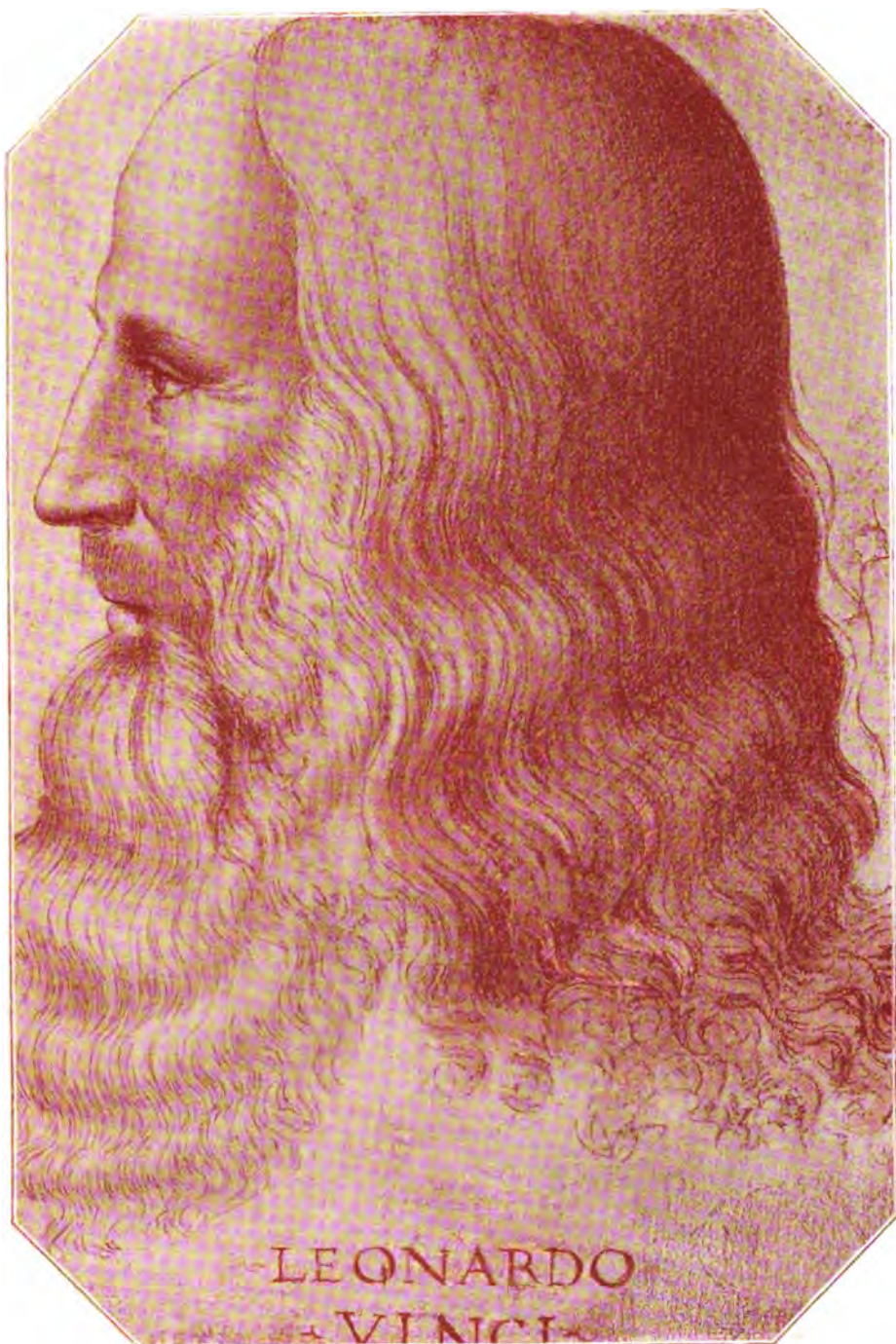
<sup>1</sup> “Era di bella persona, proportionata, gratiata, e bello aspetto. Portava un pitoccho rosato, corto sino al ginocchio, che allora s'usavano i vestiri lunghi; aveva sino al mezzo in petto una bella capellaia, ed inanellata, e ben composta” (Milanesi.—Fabriczy, *Il Codice dell' Anonimo Gaddiano*, p. 78).

<sup>2</sup> Heaton, *Leonardo da Vinci*, p. 262. There are several copies of the Windsor drawing. The principal is in the Ambrosian Library, and has been published by Gerli. Vasari's annotators speak of a second copy supposed to be in the national collection in Paris. May not this refer to the red chalk drawing showing the artist in profile, which



*Portrait of Leonardo, by Himself.*

(WINDSOR LIBRARY.)



Printed by Dreyer, Paris.



A whole family of portraits evidently springs more or less directly from this sketch. Such are the pictures of the Giovio collection, of the Uffizi Gallery (a profile), Vasari's fresco in the Palazzo Vecchio at Florence, and possibly also the engraving in his *Vite*.

None of Leonardo's biographers have devoted any serious attention to, or even mentioned, the first of these portraits—that which Paolo Giovio, the celebrated historian, caused to be painted for his museum at Como, and which he hung beside those of Michelangelo, Andrea del Sarto, and Valerio Vicentino. In this picture, Leonardo was represented with his long beard ("con quel suo volto barbato"), and consequently in mature manhood. The portrait remained at Como, in the possession of the Giovio family, until the close of the last century. It may, indeed, be there still. The litigation now in progress in the family renders any verification of the fact somewhat difficult.

It matters little, after all, whether this point is cleared up or not. I am able to point to a faithful reproduction of the effigy in the "Musæum Jovianum." Here, again, we are struck by the carelessness of the "Leonardists." Not one of them has bestowed so much as a glance on the portrait in profile in the Uffizi Gallery, a painting on canvas, of very mediocre quality it must be confessed. Yet a mere examination of the size of the canvas, its external characteristics, and the inscription upon it, involves its recognition as one of the numerous copies of pictures in the Giovio Museum executed during and after 1552, by the Florentine painter, Cristofano dell' Altissimo, at the command of Cosimo de' Medici I. All these copies bear an unmistakable family likeness to each other.

But we have something better than this. The portrait in the Giovio collection, as we know it through the Uffizi copy, was used as the basis of another, which has likewise been overlooked until the present moment :—that which figures in the fresco in which Vasari has represented the *Court of Leo X.* (Sala di Leone X., Palazzo Vecchio, Florence). In this Leonardo is shown bare-headed, in profile to the

passed into the Louvre from the Modena Gallery during the Revolution, and was returned on Sept. 28, 1815 to Herr Rosa, the commissioner appointed by Austria to receive back the spoils of our conquests? This drawing has since disappeared. It may have been a replica of the Windsor portrait. (Rigollot, *Catalogue*, p. 104.)

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left, beside his patron Giuliano de' Medici (not Lorenzo, as Vasari has incorrectly printed it.)<sup>1</sup> The relations known to have existed between Vasari and Paolo Giovio sufficiently account for the use made by the painter of the evidences, pictorial or documentary, collected by his friend.

These portraits, blurred and darkened as they are, are clearly related to that in the Windsor Library, for the authentication of which they would suffice, if that precious original needed any such demonstration.

The profile portrait engraved in Vasari's *Vite* (1568) seems to be derived from the same source. It represents an old man, with long hair and beard, the head covered by a sort of cap, which leaves the forehead bare, and comes down over the ears. The artist seems to have taken more pains to invent a striking fancy head, than to reproduce any special physiognomy.

Vasari's engraving, in its turn, inspired a medal, of the early seventeenth century, reproduced by Mazzuchelli, which nobody has been able to discover. On the face was a profile of Leonardo, looking to the left, with the inscription, "Leonardus Vincius Florentinus;" on the reverse, "Scribit quam suscitavit artem"; with a pen and brush in saltire below a crown.

This same engraving of Vasari's, so strange and so incorrect, seems to have influenced the painter of a portrait in oils on panel (in profile to the left, exactly like the engraving of 1568), which passed, in 1855, from the Guiducci gallery at Florence, into the hands of the painter and picture-dealer Gagliardi, and from his into those of Orazio Buggiani, a Florentine merchant established in London.

But let us come back to Leonardo's own portraits of himself. A second, full face, preserved in the King's Library at Turin, shows us the changes wrought by age in the illustrious artist.<sup>2</sup>

<sup>1</sup> Here is Vasari's own declaration: "Quel vecchio con quella zazzera inanellata e canuta, Leonardo da Vinci, grandissimo maestro di pittura e scultura, che parla col Duca Lorenzo che gli è allato," vol. viii., p. 159.

<sup>2</sup> A red chalk copy of the Turin portrait is preserved in the Accademia delle belle Arti at Venice (Braun, no. 44). This copy is harder and poorer than the original. Vasari's annotators have blundered (vol. iv., p. 36) in cataloguing the Turin drawing and that at Venice as two distinct portraits. One is a copy of the other. The catalogue of the King of Holland's collection (1850) mentions (no. 263) a portrait of the artist, and a head of a warrior in profile, drawn in Italian chalk and with the pen. "These fine



This portrait, later by a dozen years than that in the Windsor Library, is, like it, in red chalk. It is distinguished by the utmost boldness and freedom of execution. Age, during these intervening years, has produced its effect, we might almost say, has wrought its havoc. The hair has worn away from the broad high forehead, on which deep lines are furrowed, the brows are contracted, the eyelids wrinkled, the admirably modelled nose seems to have grown more aquiline, the mouth has put on a bitter and sarcastic expression, the hair and beard, longer even than in the profile portrait, hang in disorder, almost unkempt. The artist, we clearly see, has long since left personal vanity behind him.

In such a form as this we can best conjure up this enigmatic figure, this mighty sceptic, who has lost so many illusions, and who goes his way mocking at the ignorance of other men.

The interest of this Turin portrait is considerably enhanced by the fact that it was evidently executed in France. I have said that a comparison with the Windsor portrait convinces us that an interval of at least twelve years separates the two pictures. If, then, Leonardo was fifty, at the youngest, when he executed the first, the second must have

studies," it adds, "are very remarkable." According to a manuscript note on a copy of this catalogue, these two drawings seem to have been purchased by Mr. Woodburn. I do not know what has become of them. Arsène Houssaye tells us (p. 439) that the portrait formerly belonging to the King of the Netherlands was a black chalk copy of the Turin portrait.



SUPPOSED PORTRAIT OF LEONARDO.

(Windsor Library.)

been produced when he was at least sixty-two, and possibly sixty-four.

At that period of his life he was settled in France. I may therefore assert, without any fear of contradiction, that the wonderful red chalk drawing in the Turin Library came into existence at Amboise. The old man's hand—his left hand, for the right was paralysed—had lost nothing of its power. With an absolute sureness of touch and inexorable precision, it has traced the lineaments of the Faust of Italy. There can be no possible doubt that the picture in the Uffizi, which bears every sign of being a fancy portrait, is derived from this source.

If I am not mistaken, Leonardo's features are also recognisable in a drawing of an aged man, with a kind of helmet on his head, in the Windsor Library. There is the same aquiline nose, the same wavy hair falling on the shoulders, the same sarcastic expression. The beard, indeed seems thicker than in the Turin portrait.<sup>1</sup>

The likeness between the portrait in the Turin Library and that in the Windsor Library, representing an old man seated and looking at the waves (p. 229), is less striking.<sup>2</sup>

Another portrait in the Windsor Library, that of an old man in profile, looking to the right, offers a certain resemblance to the portrait of Leonardo in the same collection. Yet the nose is much longer and more regular, and the expression still more sarcastic; the beard is long and wavy, and the hair in plaits (p. 225).

Monsieur Charles Ravaisson-Mollien considers an exceedingly hasty sketch on the reverse side of sheet 136, MS. I. to be a portrait of the artist. It is the head of an aged man, with a hooked nose and long beard (the upper part of the face is missing), which seems to have been scrawled, as it were, across the written text. In any case, it bears a strong resemblance to the authenticated portraits of Leonardo.

<sup>1</sup> According to Herr Müller-Walde, this is a picture of King Christian of Denmark, who was at Florence in 1474. On what grounds does Herr Müller-Walde make this assertion? He does not inform us. I imagine it to be on the fact that the person represented wears a beard, and that no fifteenth-century Italian ever appeared with that appendage. Nobody but an inhabitant of the north would have dared to wear one. But if the portrait may be dated 1515, instead of 1475, this argument falls to the ground.

<sup>2</sup> Richter, vol. i., pl. xxv., p. 200.—De Geymüller, *Les derniers Travaux sur Léonard de Vinci*, p. 23.

Following on Leonardo's portraits of himself come those drawn or painted by his contemporaries.

The most famous of these is the oil picture in the Uffizi Gallery; this is Leonardo arranged, conventionalised, emasculated. The canvas is not only by some other hand; it does not seem to have been painted during his lifetime. It is now supposed to be the work of Schidone, of Sisto Baldalocchio, or possibly of some imitator of Correggio (p. 233).

The figure of an old man, introduced by the most sympathetic of all the master's imitators, Bernardino Luini, in his *Marriage of the Virgin*, a fresco painted in the church of Saronno, is also believed to be a portrait of Leonardo.<sup>1</sup>

This represents a man with long white hair and beard with a sort of biretta on his head. He appears once in the foreground, and once again standing against a door, in the background of the composition. In any case the portrait, if such it be, is a fancy picture, without any of the exactness of a study from nature.<sup>2</sup>

Let us endeavour to point the moral of this study. A mere consideration of dates, and appeal to merciless chronology, forces a most distressing conviction upon our minds: the splendid specimen of manhood, the inspired poet, the radiant Apollo of his generation, whose gifts cast dazzling rays across the darkest shadows of the profoundest sciences, aged before his time! The golden beard, and the curling rings of hair, which were the admiration of his century, were silvered over before he had attained his fiftieth year! He had worked so hard! He had grappled with every

<sup>1</sup> This theory was first put forward, if I mistake not, by M. Séailles in his recent work *Léonard de Vinci, l'Artiste et le Savant*. For the portrait of Leonardo, which appears in the *Adoration of the Magi*, lately hung in the Uffizi Gallery, and described as a Botticelli, see Signor Ridolfi in *Le Galerie nazionali italiane*, vol. iii., and the *Gazette des Beaux Arts*, 1898, vol. ii., p. 184.

<sup>2</sup> Amoretti asserts that a *Treatise on Music*, the MS. of which is preserved in the Trivulzio Library, bears on its frontispiece a miniature of Leonardo, holding a cither (*Memorie*, p. 25, cf. Vasari, Milanese's ed., vol. iv., p. 28). But in Conte Porro's catalogue of this collection, he affirms that the figure referred to bears no resemblance to the artist (*Catalogo dei Codici manoscritti della Trivulziana*, p. 158, Turin, 1884). If Viardot is to be believed, the Esterhazy Gallery, now located at Pesth, contains an absolutely authentic portrait of Leonardo (*Les Musées d'Allemagne*, p. 241). But this portrait (no. 357), a half-length figure, which, in former days, was believed to be a portrait of Leonardo by his own hand, is considered by Herr Frimmel to be the work of some French or Brabantine painter (*Kleine Galerie Studien*, vol. ii., p. 150-151).

problem of physical and moral existence. He had spent night after night resolving questions, wrestling with doubts. And, further, being both artist and savant, with an imagination,—I had almost said a fancy—which equalled his powers of methodical reflection, he had encountered endless disappointments. His patrons left him, born “grand seigneur” as he was, without the common necessities of life! One of his friends, Lodovico il Moro, was condemned to languish in the hideous dungeon at Loches; another, Cæsar Borgia, whilom dictator of all Italy, was immured in another prison; his fellow-citizen, the Gonfaloniere of Florence, Soderini, dunned him to carry out his work, and would have paid him in small coin, like any artisan; Pope Leo X. stormed at him because he produced so slowly; the warmest of all his patrons, Giuliano de’ Medici, the Pope’s brother, died in the flower of his age, but a few months after his marriage! The reasons why Leonardo da Vinci looked old before his time are only too evident.

On the whole, the patron who, though perhaps he only partly understood him, loved him best, who showed him most kindness, and showered most favours on him, was, and I say it with pride, our own Francis I., a man who was great in heart, and great in his generous desires, at all events, if he failed in political judgment and consistency. The red chalk drawing in the Turin Library is a most invaluable document, showing how great an amount of intellectual vigour still stirred in the old man’s brain at the period when such liberal and truly royal hospitality was extended to him, in our native country.

Michelet, who has written such delightful pages on the subject of Leonardo, tells us that he formed no pupils. Nothing could be more misleading than this statement. No master, whether in close contact or at a distance, ever exercised a more energetic influence. His theoretical works were certainly prepared for the use of his disciples, and not for his own; for what need had he to formulate the results of his lengthened experience?

In the case of such an initiator as Leonardo, who began so much and completed so little, the study of his pupils’ work presents features of peculiar interest; for at every turn we come upon a development of some one of the master’s ideas, the reflection, the echo of something which had been to him no more than an intention, the blossoming of some germ of his procreation.

The pupils directly formed by Leonardo were numerous<sup>1</sup>: Salai, Melzi, Boltraffio, Marco d'Oggiono, Giampietrino,—perhaps, too, Francesco Napoletano. Still more numerous are those who drew their



PORTRAIT OF LEONARDO BY AN UNKNOWN PAINTER.  
(The Uffizi, Florence.)

inspiration from him, more or less consistently and continuously:

<sup>1</sup> See ante, p. 225.—Cf. Passavant, *Kunstblatt*, 1838, pp. 277, 279, 282, 283, 290, 291, 294-296, 301, 302, 307, 308.—*L'Histoire de l'Art pendant la Renaissance*, vol. iii. In the *Archivio storico dell'Arti* of 1897, fasc. i. I published a study, tracing the influence of Leonardo on the Florentine school, on Raphael, on Dürer, on Holbein, and on the Flemish school. I must refer my readers to this study, which want of space prevents me from reproducing here.

Ambrogio de Predis and Bernardino dei Conti, Andrea Solario, Cesare da Sesto, the miniaturist Fra Antonio da Monza, and, above all, Sodoma, and Bernardino Luini.

Francesco Melzi, the venerable artist's Benjamin, has already been introduced to my readers. No less dear to him was Salai. But let us turn to Vasari. "At Milan Leonardo da Vinci took as his pupil one Salai,—a Milanese remarkable for his beauty and grace, with beautiful curling and wavy hair, which Leonardo greatly loved,—and taught him many things pertaining to his art. Several works ascribed in Milan to Salai were touched up by Leonardo." This, if I am not mistaken, is all we know of the life history of the young Salai, or Salaino.

Some time since, while perusing a collection of papers connected with the history of Hungary, I was struck by the appearance of the uncommon name, Andrea Salai, described, to my great surprise, as a Hungarian, and a crossbowman. "Andrea Salai, Ungero Balistrero."<sup>1</sup> This individual was at Brindisi, and in the service of the House of Naples, in 1481. In all probability, he was the father of Leonardo's pupil; for if Salai had borne arms in 1481, he would have been Leonardo's contemporary, or very near it; whereas he really was more in the position of his adopted son.

Some people will raise the objection that in Italy a son is very seldom given his own father's Christian name. I grant it. He is generally named after his grandfather. Still, exceptions frequently occur. In the family of Vespasiano dei Bisticci, Filippo, the brother of the famous bookseller and biographer, bore his father's name.<sup>2</sup>

Andrea Salai (the diminutive of Salaino) first makes his appearance in 1495. He fulfilled the duties of "garzone" (almost those of a servant) about Leonardo's person. (The intimacy existing in those days between master and man imparted a dignity, which has now well nigh disappeared, to all domestic service.) His master's extreme indulgence permitted him to gratify a tolerably extravagant taste. In

<sup>1</sup> *Monumenta Hungariae historica; Diplom.*, vol. iii., p. 4 (Pesth, 1877).

<sup>2</sup> See Bartoli, *Vespasiano dei Bisticci*. It should be noted that a "D. Jo. Jacobus de Caprotis, dictus Salay, filius q. D. Jo. Petri," is mentioned as having lived at the Porta Vercellina at Milan, in 1524. The lamented Caffi wondered whether the painter Andrea Salai may not have belonged to this Caprotti family. (*Di alcuni Maestri di Arte nel secolo xv. in Milano poco noti o male indicati*, p. 16-17. *Archivio storico lombardo*, 1878.)

1497 he gave him a cloak ("una cappa") which cost no less than between five-and-twenty and thirty lire; there were eight yards of cloth in it, with green velvet for the facings, ribbons, and I know not what.<sup>1</sup> The entry of this payment is followed by a note which casts a somewhat unpleasing light on the young man's character. "Salai rubò 4 soldi" (Salai has stolen 4 soldi). In 1502 the kind-hearted Leonardo gave his pet retainer two gold ducats (about £4), to buy himself a pair of shoes trimmed with rose colour.<sup>2</sup> He took an interest, too, in his favourite's family, and lent him thirteen crowns, in 1508, to make up his sister's dowry.<sup>3</sup>

In January, 1505, Salai testified his great anxiety to "far qualche cosa galante," for the Marchesa Isabella d'Este. His offer does not seem to have been accepted, and we are all the more astonished to find the Florentine correspondents of that lady selecting Leonardo's pupil to judge, nay, even to correct Perugino's picture, *The Battle between Love and Chastity*, which was to adorn the walls of the Palace at Mantua.<sup>4</sup>

Salai accompanied Leonardo to Rome in 1514, but he refused to follow his master to France, preferring to settle in the house he built himself in the vineyard owned by the artist close to the gates of Milan. Half this vineyard was, as we have seen, bequeathed to him by Leonardo.

The later circumstances of Leonardo's favourite pupil and the date of his death are wrapped in obscurity.

No acknowledged work by Salai has yet been discovered, though a series of imitations, more or less free, of his master's works—the *Saint Anne*, the *Virgin and Child* in the Uffizi Gallery, the *Saint John* in the Ambrosiana,<sup>5</sup>—are ascribed to him. The *Holy Family* in the Brera, to which his name is affixed, is remarkable for its exceedingly intense, almost opaque, colour, and for a general weakness, emptiness, and lack of inspiration. The *Virgin* is of a pronounced Leonardesque

<sup>1</sup> Richter, *Leonardo*, p. 60.

<sup>2</sup> Ravaisson-Mollien, *Bulletin de la Société nationale des Antiquaires de France*, 1889 p. 206-208.

<sup>3</sup> Amoretti, p. 95.

<sup>4</sup> Braghirolli, *Notizie intorno . . . a Pietro Vannucci*, p. 39. Cf. Luzio in *L'Archivio storico dell'Arte*, 1888, p. 183.

<sup>5</sup> Woltmann and Woermann, *Geschichte der Malerei*, vol. ii., p. 562.

type, and the flowers which adorn the foreground are very carefully painted.

No authentic work by Pietro Ricci (Giovanni Pedrini, or Giampietrino) is known to exist. Morelli has ascribed a series of sacred pictures, very cold in tone, in which a strong shade of orange yellow predominates, (amongst them is a *Madonna* in the Borghese Gallery at Rome), to this painter's brush.<sup>1</sup> His fame rests chiefly on a picture of *Plenty* in the Borromeo collection at Milan, and on free copies of *The Virgin*, and the *Child Jesus with the Lamb*, from Leonardo's *Saint Anne*, in the Poldi-Pezzoli Collection in the same city. He is suggested by M. Somoff as the author of an *Angel*, in the Hermitage Collection.<sup>2</sup> Our knowledge of the artist is so scanty that any attempt to form a judgment as to his work would be rash.

If darkness hangs over the work of Melzi, Salai, and Giampietrino, Giovanni Antonio Boltraffio (who died in 1516, at the age of forty-eight, and who, like Melzi, belonged to a well-known Milanese family), stands out, a clear historical entity. This artist, whose style in his large picture now in the Louvre (the *Madonna of the Casa Casio*, dated 1500), was still somewhat heavy and awkward, attained, under Leonardo's influence, a rare refinement, as exemplified in his *Madonna and Child*, in the Poldi-Pezzoli Gallery, and his *Holy Family*, now in the Seminario at Venice.<sup>3</sup>

Marco d'Oggione, who specially employed himself in making copies of Leonardo's *Last Supper*, was a hard-working artist, whose works are wanting in vivacity of feeling and purity of drawing. In his compositions, intensity of colour does duty for intensity of sentiment. The most attractive of his pictures—the *Archangels victorious over Satan*, in the Brera Museum—demonstrates the inadequacy of Leonardo's immediate pupils, whenever they were called upon for dramatic expression. Their capabilities were confined to idyllic subjects; yet Leonardo

<sup>1</sup> *Die Galerie Borghese und Doria Pamfili*, p. 202-206.—*Id. Die Galerie von München*, p. 114.—Frimmel, *Kleine Galerie Studien*, vol. ii., p. 22.—*Archivio storico dell'Arte*, 1890, p. 358.—Frizzoni, *Zeitschrift für bildende Kunst*, vol. xvii., p. 122.—A *Madonna and Child*, in Mr. A. Hallam-Murray's collection, was engraved in the *Magazine of Art*, 1894, p. 148.—Bode, *Gazette des Beaux Arts*, 1889, vol. i., p. 500.

<sup>2</sup> *Ermitage impérial. Catalogue de la Galerie des Tableaux. Les Ecoles d'Italie et d'Espagne en 1637.* (1891.)

<sup>3</sup> Venturi, *Archivio storico dell'Arte*, 1898, p. 415. Frimmel, *Kleine Galerie Studien*, vol. ii., p. 221-224.





THE MARRIAGE OF THE VIRGIN, BY BERNARDINO LUINI.  
(Church at Saronno.)

himself, in the *Last Supper* and the *Battle of Anghiari*, had shown the originality and power with which he could treat mental struggle and physical effort.

Cesare da Sesto was also an occasional imitator of Leonardo. He oscillates between him and Raphael, except, indeed, when—as in his brilliant *Madonna* in the Brera (no. 265)—he makes an excursion into the style of Peruzzi or Correggio. The horses in one of his studies for his *Adoration of the Magi*, now in the Accademia at Venice, are a flagrant imitation of Leonardo.<sup>1</sup>

The two most brilliant disciples of the leader of the Milanese school, Antonio Bazzi, surnamed Il Sodoma, and Bernardino Luini, may never, possibly, have had the good fortune to listen to his counsels. I will give no fresh description in this place of the gifts of these two incomparable artists, nor of those of their successor, Gaudenzio Ferrari: my readers will allow me to refer them to the third volume of my *Histoire de l'Art pendant la Renaissance*, in which I have striven to make their work known, and win both admiration and affection for it. I will only point out that the loving care, amounting to minute attention, which Leonardo lavished on the least of his productions, does not characterise either Luini or Il Sodoma. Both these artists betray a tendency to generalisation, without any recourse to those endless researches which have as much to do with science as with art. They do not, in fact, belong to the fifteenth century, and they were able, thanks to the efforts of their glorious forerunner, to make free use of the formulæ he had so laboriously acquired. There is something literary, too, in their genius. They are more fitted for the brilliant development of some given subject, than inclined to strive after the solution of a technical problem, the rendering of some effect of light, the defining of some physiognomy, or characteristic object. In a word, there is as much of the poet in them as of the painter.

<sup>1</sup> Morelli, *Die Galerien zu München und Dresden*, p. 120 (with reproduction).—Among the most fervent of Leonardo's Milanese imitators was the painter and writer, Giovanni Paolo Lomazzo (born in Milan 1538, died about 1600). Lomazzo collected a large number of the master's works, pictures, drawings and manuscripts, from which he diligently sought inspiration. His sight failed him, however, while he was still a young man, and he then applied himself to literary labours, historical and theoretical, in which we find much precious information concerning the great founder of the Milanese school.



*A Study by Rembrandt after Leonardo's "Last Supper."*

(PRINCE GEORGE OF SAXONY'S COLLECTION.)





Printed by Draeger, Paris



Portrait painting holds quite a secondary position in their artistic work; for they looked upon individual men and women merely as actors in their skilfully conceived and eloquently rendered scenes. They have none of the eager and untiring curiosity of their master.

Is it a fact that the Venetian school, in spite of much apparent affinity, never felt the effect of Leonardo's influence? It has been asserted that neither in Giorgione's work nor in that of Lorenzo Lotto, who has been occasionally described as one of the pupils of the leader of the Milanese school, can the slightest trace of any of Leonardo's teaching be discovered.<sup>1</sup> As far as Giorgione is concerned, at all events, I have already demonstrated that his familiarity with Leonardo's work and tendencies was far greater than has been believed.<sup>2</sup>

Titian's *Tribute Money* has appeared to several modern critics to attempt the same problems as the *Last Supper* in the Refectory of Sta. Maria delle Grazie.<sup>3</sup>

The Kingdom of Naples is represented in this connection by the painters Francesco Napoletano and Girolamo Aliprandi. The former may be studied in the Brera Gallery in a Virgin seated and holding the Child (no. 263 A), brown in colour, after the style of Boltraffio. The Child's eyes are puffy, the expression of the Virgin is irresolute. The type, with its high chin, somewhat recalls that of Leonardo's drawing in the Uffizi. It also reminds us of the *Madonna Litta*. Francesco Napoletano seems to have settled very early in the sixteenth century at Valencia, in Spain, and never to have left that country again. A set of *Scenes from the Life of the Virgin* (1506) in the Cathedral of Valencia, is of a pronounced Leonardesque character. As for Girolamo Alibrando, or Aliprandi, of Messina (1470—1524), he studied Leonardo with so much ardour for his *Presentation in the Temple* in the Duomo at Messina, that the picture was long ascribed to the master.<sup>4</sup>

In the seventeenth century, Rubens studied Leonardo da Vinci's

<sup>1</sup> Morelli, *Die Galerien in München und Dresden*, p. 202-203.

<sup>2</sup> *Histoire de l'Art pendant la Renaissance*, vol. iii., p. 600.

<sup>3</sup> See Springer, *Bilder aus der neueren Kunstgeschichte*, 2nd ed., vol. ii., p. 82.

<sup>4</sup> *Memorie de, Pittori Messinesi*, Messina, 1821 pp. 29-34.—*Il Cicerone*.

work with passionate eagerness, and paid eloquent homage to the greatness of his genius. When he passed through Milan he made a drawing of the *Last Supper*. We also owe him the copy of the central group in the *Battle of Anghiari*. Rembrandt, too, laid Leonardo under contribution.

My readers will thus realise the number of directions in which the influence of Leonardo disseminated itself. And this without taking into account either Correggio, or his own immediate pupils and imitators,—Salai, Boltraffio, Marco d'Oggione, Cesare da Sesto, Andrea Solario, Melzi, Bernardino Luini, Il Sodoma, Gaudenzio Ferrari.

We learn from the old legend that a single drop of milk from Juno's breast produced the Milky Way. Thus one look from the great Leonardo has sufficed to fill Italy and all Europe with masterpieces. Everywhere the seed sown by this mighty magician has brought forth fruit an hundredfold.

<sup>1</sup> *Gazette des Beaux Arts*, March, 1892.—*Repertorium*, 1893, vol. xvi. no. 1.



STUDY FOR THE EQUESTRIAN STATUE OF FR. SPORZA.

(Windsor Library.)



# APPENDIX

## CATALOGUE OF THE WORKS OF LEONARDO DA VINCI

### NOTE

*A* "CATALOGUE RAISONNÉ" of the whole work of Leonardo, pictures and drawings, would extend this biography to unreasonable limits; for it would afford material for several substantial volumes. I must perforce confine myself to the enumeration of the chief things ascribed to him, many of which, by the way, have no right to bear the master's name.

A readily made collation of my work with those of Venturi,<sup>1</sup> Gault de St. Germain,<sup>2</sup> Vallardi,<sup>3</sup> Rigollot,<sup>4</sup> Arsène Houssaye,<sup>5</sup> and Mrs. Heaton,<sup>6</sup> will show with what an enormous mass of materials I have had to deal. Putting aside those works, the history of which has already been set forth by Rigollot, I shall mainly devote myself to the publication of as many new facts as possible.

Leonardo, like Michelangelo (who did, however, by exception put his name on the "Pietà" in St. Peter's), never signed his works, so that endless discussion has gone on, and is likely to continue to the end of time, as to the authenticity of his various drawings and pictures.<sup>7</sup>

As the foregoing volumes contain descriptions and discussions of every picture ascribed to him with any show of probability, I need here do no more than recapitulate them, for the sake of completeness.

<sup>1</sup> *Essai sur les Ouvrages physico-mathématiques de Léonard de Vinci*, Paris, 1797.

<sup>2</sup> *Traité de la Peinture*, ed. of 1820, p. 53 et seq.

<sup>3</sup> *Disegni di Leonardo da Vinci*, Milan, 1830.

<sup>4</sup> *Catalogue de l'Œuvre de Léonard de Vinci*, Paris, 1849.

<sup>5</sup> *Histoire de Léonard de Vinci*, Paris, 1869.

<sup>6</sup> *Leonardo da Vinci and his Works*, London, 1874.

<sup>7</sup> See Uzielli's *Ricerche*, 1st ed., vol. ii., p. 432-441, on the orthography of the name Da Vinci, and on the supposed marks or monograms used by Leonardo.

*As for false Leonardos, the list is so interminable that it would be impossible as well as useless to enumerate them here. I must be content, therefore, to refer the reader to previous catalogues, restricting myself to a few general observations on pictures erroneously ascribed to the master, and on such as have disappeared.*

*Mention of a few other pictures ascribed to Leonardo will be found in the "Raccolta di Cataloghi ed Inventarii inediti," published by G. Campori (Modena, 1870), and in the Catalogue of the Milanese Exhibition, held at the Burlington Fine Arts Club in 1898 (nos. 39-42, 47, 59, 60, etc.).*

To avoid increasing the size of this volume I shall publish a bibliography of Leonardo separately.

## A

## MURAL PAINTINGS AND EASEL PICTURES

## I

SUBJECTS TAKEN FROM THE BIBLE AND FROM  
THE LEGENDS OF THE SAINTS.

The *Temptation of Adam and Eve*, vol. i., p. 47.

The *Annunciation*, Louvre (ascribed), vol. i., pp. 45, 49-51.

The *Annunciation*, Uffizi (ascribed), vol. i., pp. 1, 50-51.

The *Virgin and Child*, Dresden (falsely ascribed), vol. i., p. 52, note.

The *Virgin with the Pink*, Munich (ascribed), vol. i., p. 51-52. Replica in the Louvre.

The *Litta Madonna*, or *Vierge au Sein*, Hermitage (ascribed), vol. i., p. 175-176. Reproduced, vol. i., pl. xii. This picture is usually considered identical with one which was in the house of Michele Contarini, in Venice, in the year 1543. Signor Frizzoni, however, calls attention to the fact that the Petersburg picture is larger than the one formerly in Venice (*Notizie d'Opere di Disegno*, pp. 225-226).

The *Vierge aux Rochers*, or *Madonna of the Rocks*, Louvre, vol. i., pp. 162-175, 211. Rep., vol. i., pl. vii. Besides the example in the National Gallery a certain number of other old copies or free repetitions of this *Madonna* are known. In the first place, we have the example acquired by M. Chéramy in 1897, at the Plessis-Bellière sale (canvas, 1 m. 55 cm. x 1 m. 25 cm. See the *Réunion des Sociétés des Beaux Arts des Départements* of 1890, and the *Revue de l'Art ancien et moderne*, of 1897, vol. ii., p. 405). This remarkable picture is a little rubbed in the carnations; the hands of the two children are retouched, and so are the feet of the Child Jesus. The Virgin's bodice shows a greenish tone, which seems suspicious, and we may say

the same of her yellowish drapery. In the distance, to the left, the dome of the Cathedral of Florence shows among the rocks.

Other copies exist in the Nantes Museum (*Inventaire des Richesses d'Art de la France*), in the Weber Collection at Hamburg (Woermann, *Wissenschaftliches Verzeichniss der älteren Gemälde der Galerie Weber in Hamburg*; Dresden, 1892, p. 86), in the collection of Madame Chaix d'Est-ange, 22 Avenue du Bois de Boulogne, Paris.

The Naples Museum possesses a free and imperfect version, ascribed to Niccolò dell' Abbate.

A free copy, ascribed to Cesare da Sesto, figured at the sale of the Marchese D— of Genoa, in 1888. (*Impresa di Vendite in Italia di Giulio Sambon, Catalogo della Collezione del Marchese D—, di Genova*. Milan, 1888. No. 216, with a photograph of the picture.)

Another free copy of the central group, with an *Annunciation to the Shepherds* in the background, belonged some fifty years ago to the English (?) picture dealer Coesvelt (Müller-Walde, p. 117). For other copies see the *Cicerone*, seventh edition, p. 739 [and the Burlington Catalogue above quoted.—ED.].

The *Holy Family* of the Hermitage, original lost, vol. ii., p. 181. Rep., vol. ii., pl. xviii.

The *Vierge au Bas-Relief*, original lost, vol. ii., p. 181-182. The Earl of Carysfort has the copy ascribed to Cesare da Sesto, which was long at Gatton Park. It was exhibited at the Burlington Fine Arts Club in 1898. For other copies see Rigollot (p. 32-40).

The *Madonna del Gatto*, original lost, vol. ii., p. 183-184.

The *Virgin with the Distaff*, original lost.

Letter of P. da Nuvolaria, April 4, 1503, vol. ii., p. 121.

The *Madonna of Grenada*, a small picture formerly ascribed to Lorenzo di Credi. (See Crowe and Cavalcaselle's *History of Painting in Italy*, vol. iii. p. 407.)

The *Virgin with flowing Hair*, in the Museum of Augsburg. Morelli says this is a Flemish picture (*Die Galerien zu München und Dresden*, p. 347 [Miss Ffoulkes's translation, vol. ii. p. 268]).

The *Madonna of Vaprio* (ascribed); vol. ii., p. 190.

The *Madonna of S. Onofrio*, Rome, vol. ii., p. 200-203.

The *Madonna with the Scales*, original lost, vol. ii., p. 181-182. Rep., vol. ii., pl. xvii. The *Madonna of the Palazzo Sanvitali*, at Parma (the Virgin with S. Michael and the little S. John), seems to have something in common with this picture.

The *Virgin and S. Anne*, Louvre, vol. ii., pp. 121-132, 162-163. Rep., vol. ii., pl. 19. The numerous copies and imitations of this picture have been catalogued by Mr. Marks in a pamphlet devoted to the question.

The *Madonna della Caraffa*, which belonged to Pope Clement VII. (Vasari). Lost. Mentioned by d'Argenville as in the Vatican in his time (*Abrégé*, vol. i. p. 148). According to M. C. Brun (p. 11), the example in the Borghese is the work of Lorenzo di Credi.

The *Madonna di Milano*, Brera. A fragment, the head turned slightly to the left; a bust, the hair plaited. Chalcography of the Louvre, old number, 326. Drawing by B. Desnoyers; engraving by Massol.

*Holy Family* in Lord Ashburton's collection, formerly in the Priory of the Escorial. Considered authentic by Rio (*L'Art Chrétien*, vol. iii. p. 79), but not so by Waagen (*Treasures of Art in England*, vol. ii. p. 98-99).

*Madonna* in Lord Battersea's collection. The Virgin is seated, turned slightly to the right; she holds the Child on her lap; he is quite nude, and is also turned to the right; he holds a little cross in his left hand. Background of jagged mountains. This picture—which I only know from photographs—seems to be very beautiful, and to come very near Leonardo. I would point out, however, that the Child's head is too large, and that the execution generally lacks modelling. In type, this Virgin resembles the one in the Louvre *S. Anne*. This picture was bought at Christie's, at the sale of a lady who had it from Lady Lansdowne. It was at the *Old Masters* in 1880, at the New Gallery in 1894, and at the Burlington Club in 1898. [A similar picture, with slight changes, belongs to the Duke of Buccleuch, and another to the Duke of Wellington.—ED.]

An inventory of Baron Castelvargo's collections at Agosta (1608), mentions an expenditure of 100 crowns for "le cornici del disegno della Madona di Lionardo con la condotta." (*Atti . . . per la provincia di Torino*, 1878, vol. ii. p. 43.)

A *Madonna* by Leonardo da Vinci—said to be original—was bequeathed in 1696 to P. Bourdaloue by François de Rochechouart, Marquis de Chaudenier (*Chronique des Arts*, 1893, p. 110). But we know how careful we should be in accepting the attributions of the seventeenth century.

*Madonna with the Child, S. Catherine and a Donor*, in the Church of Sant' Eufemia, at Milan. This half-destroyed fresco has of late years been re-claimed for Leonardo (Schmarsow, *Jahrbuch* for 1881, vol. ii. p. 135).

The *Madonna with the Lily*. An engraving by Jos. Juster represents the Virgin with the Child and bears the following legend: "Jesus ludens in gremio sanctissimæ matris lilium tenens. Opus absolutissimum Leonardi Vinci pro christianissimo Rege Francisco I. Joseph, Juster, sc." The Virgin is seen to the waist, seated, holding the Child upon a cushion which lies on her knees; he holds a lily. In the background, to the right, a rock; to the left, a landscape. This picture once belonged to Charles Patin (Mariette, *Abecedario*, vol. iii. p. 167.—Rigollot, *Catalogue*, no. 96).

The inventory of pictures carried off by the French in 1797 from the Modena Gallery mentions "La B. V. con il Bambino che accarezza l'agnello, Leonardo da Vinci (Piccolo per l'impiedi)." Venturi, *la R. Galleria Estense*, p. 403.

The *Nativity*, original lost, vol. i., p. 205.

The *Adoration of the Magi*, Uffizi, vol. i., pp. 16, 40, 45, 53, 61-80, 141, 161; vol. ii. pp. 6, 17.

The ascription to Leonardo of an *Adoration of the Magi* preserved at Saint-Paterne (Touraine), is quite fantastic (*Réunion des Sociétés des Beaux Arts des Départements*, 1897, pp. 187 et seq.).

*Christ disputing with the Doctors*, National Gallery; ascribed to Leonardo, but in reality by Luini.

[The ascription to Leonardo has long been abandoned, and the picture now bears the name of Bernardino Luini.—ED.]

A half-length of *Christ*. Père Dan mentions among the pictures of Leonardo preserved at Fontainebleau a *Christ a mi-corps*. Lépicié, again, says the king possessed such a picture. See also Mariette's *Abecedario* (vol. iii. p. 167). This picture, which has nothing to do with Leonardo, is now in the Museum at Nancy (engraved in the *Magasin pittoresque* for 1849, p. 288, with a commentary by the Marquis de

Chennevières). According to M. Durand-Gréville it is a Flemish picture of the sixteenth century.

A *Christ bearing the Cross*, in the Liechtenstein Gallery at Vienna, is attributed by Waagen to Cesare da Sesto. It is a hard, dull picture, with a surface like yellow wax.

The *Last Supper*, Refectory of Santa Maria delle Grazie, at Milan, vol. i., p. 177-200; vol. ii., p. 109 Rep., vol. i., pl. viii.

*Head of Christ*, Brera, Milan. Rep., vol. i., pl. ix.

The reader will understand how impossible it is to discuss all the copies made from the *Last Supper* in the sixteenth century. Lists of the chief ones will be found in Bossi (*Del Cenacolo di Leonardo da Vinci*, Milan, 1810), Guillon (*Le Cénacle de Léonard de Vinci*, Milan, 1811), and in Stendhal (*Histoire de la Peinture*, p. 152-154).

*Heads of Apostles*, Weimar Museum, vol. i., p. 191, note. See vol. i., pl. x.

*Heads of Apostles*, Strasburg Museum. Six cartoons in colour after the heads in the *Last Supper*. The head of Christ is beardless. These copies are very weak in expression, and Dehio, who has written a monograph upon them, hesitates to pronounce decisively upon their origin. He thinks, however, that they might be referred to Boltraffio without much temerity (*Jahrbuch* for 1896).

Among the copies made for French amateurs, I may note: one made for the Cardinal d'Amboise (1510): "la Cène faite en toile en grands personnages, que feu monseigneur fist apporter de Milan" (Roman: *Réunion des Sociétés des Beaux Arts des Départements*, 1883, p. 61-65). Francis I. caused a copy to be made in tapestry (it is now in the Vatican); the Connétable de Montmorency another, on canvas; this copy, formerly in the Château of Écouen, is now in the Louvre. It has little merit. The colour has a disagreeable red tone, and the heads are hard and mean in expression. It contains several variations upon Leonardo. The two side-walls have doors in them, but are otherwise quite bare, and without the happy ornament of the original.

Marco d'Oggiono's copy, formerly at the Certosa, Pavia, now belongs to the Royal Academy of Arts. It hangs in the Diploma Gallery.

Among copies unknown to Bossi I may mention one in the Ospedale Maggiore of Milan, painted by one Antonio da Gessate, at the beginning of the sixteenth century (*Arte e Storia*, 1890, p. 215; *Archivio storico dell'Arte*, 1890, p. 410); that of the Hermitage (no. 78 in the catalogue of 1891), and one at Ponte Capriasca.

A copy by Cesare Magnis has been acquired by the Brera (*Archivio storico dell'Arte*, 1890, p. 410).

A very mediocre copy was brought to Paris in 1891, by some Russian or Hungarian dealers, and offered as Leonardo's original sketch!

The *Last Supper* was copied by the miniaturists of the sixteenth century, as we may see in a Book of Hours exhibited in the Royal Library of Brussels. (*Livre d'Heures de Hennessy*.)

In a *Notice d'un Haut-relief en bronze doré, représentant la Cène ou Cénacle, tableau de Léonard de Vinci, peint dans le réfectoire du monastère des dominicains de Santa Maria delle Grazie, à Milan* (Odessa, 1890; small folio of 14 pages, with 6 photographs), M. P. Kortschak attempts to prove that the relief in question (which belongs to M. Peter Schoumlansky, at Kichinef) was modelled and chased by Leonardo himself, and that the famous wall-picture was painted from it!

The *Resurrection of Christ*, Berlin Museum (ascribed), vol. i., p. 53; cf. vol. ii., p. 182.

*Head of an Angel*. Lost. Vasari tells us that there was in the palace of the Grand Duke Cosimo de' Medici a picture of an angel's head, with a raised arm, so painted and foreshortened from the elbow to the shoulder that it seemed to project from the picture, while the other arm was folded upon the breast. According to Vasari's editors, this picture was discovered in Florence in a deplorable state, and sold to a Russian.

*Angels*, full length, playing on musical instruments, National Gallery. These were acquired in 1898, from the Melzi collection, Milan, vol. i., p. 169; vol. ii., pp. 36-37. They are probably the work of Leonardo's assistant, Ambrogio de Predis. One of the two, the one in profile, does not even show the Leonardesque type, and the execution is entirely unlike that of the central panel, the *Madonna of the Rocks*.

*Angel*, in Lord Ashburton's collection. Falsely ascribed to Leonardo, according to Waagen (*Treasures of Art*, vol. ii. p. 99).

*S. John the Baptist*, the Louvre, vol. ii., pp. 184, 211-212. Rep., vol. ii., pl. 26. Copies in the Ambrosiana and in the Naples Museum.

Imitations: in the collection of Mr. W. G. Waters, London. The right arm raised on the left side of the head. *New Gallery*, 1893-1894; no. 193. In the Hewitson collection, the right arm raised on the right of the head. *New Gallery*, 1893-1894; no. 187. Miss Ffoulkes ascribes this picture to Salaino: *Archivio storico dell'Arte*, 1894, p. 255.

*S. Jerome in the Desert*, vol. i., pp. 79, 81. For replicas of this composition see Rigollot's *Catalogue*, no. 6. The inventory of the pictures preserved in the Palazzo del Giardino, at Parma, in 1680, mentions a "quadro alto br. 1 on. 1, largo on. 10; un S. Girolamo con la mano

destra al petto, et alla sinistra vi ha un libro, di Leonardo da Vinci" (Campori, *Raccolta di Cataloghi ed Inventarii inediti*, p. 216-217).

*S. Sebastian*, sold to the Czar for 60,000 francs by M. Wolsey-Moreau, of Paris. See Charles Blanc (*Gazette des Beaux Arts*, 1861, vol. i., p. 65-74), and Morelli (*die Galerien Borghese und Doria Pamfili in Rom* (p. 87-88). This picture, which has nothing in common with Leonardo, has been discussed in connection with a drawing in the Vallardi collection in the Louvre, of a naked man holding a dog under his left arm (a *pasticcio* on the *Faun with the Panther*), which may well be by Pisanello.

*S. Catherine*. In 1650 the Modena Gallery exchanged a *S. Catherine* by Leonardo for a portrait by Titian (Venturi, *La R. Galleria Estense*, p. 243).

The *S. Catherine* of Louis XIV.'s collection—it now hangs in the chapel at Compiègne—is very commonplace in execution. The saint is seen to the waist between two angels; she holds a book. It has blackened a little in colour, and at most is a work of Leonardo's school.

The *Daughters of Herodias* ascribed to Leonardo are numerous, but none have any claim to be considered authentic.

I may say the same of the drawings and pictures representing the Magdalen (Rigollot, no. 49). The French *Cabinet des Estampes* has two engravings dealing with the subject: the one, signed "Ant. Riccioni inc.", represents the saint to the waist, full face, holding a vase in her right hand and supporting the folds of her robe with the left ("Ex originali tabula olim in ædibus Aldobrandinis"). The other is different, and shows the saint raising the lid of her pot of ointment. There is no indication of *provenance*.

## II

MYTHOLOGICAL, ALLEGORICAL, AND  
HISTORICAL SUBJECTS

*La Rotella*, vol. i., pp. 45-46, 141.

*Medusa's Head*, Uffizi, vol. i., p. 46-47. The author of the *Cicerone* believes this to be the work of a Milanese, perhaps Lomazzo, painted from the description given by Vasari. Another head of Medusa (front face, the mouth open, serpents about the head, derived, undoubtedly, either from Vasari's description, or from the Uffizi picture) is, in the same collection, ascribed to Caravaggio.

Decorative paintings in the Castle of Milan.

*Bacchus*, Louvre, vol. ii., pp. 184-185. Rep. vol. ii., pl. xx.

*Leila*, formerly at Fontainebleau, vol. ii., p. 164-169.

The *Rape of Proserpine*. Cassiano del Pozzo, who was at Fontainebleau in 1625, speaks of this picture as very careful, but somewhat hard and dry in execution (Müntz and Molinier, *Le Château de Fontainebleau au XVII<sup>e</sup> siècle*, Paris, 1886, p. 17). The figure of Proserpine, supported by Pluto, is, he adds, the best. Were it not for Del Pozzo's general trustworthiness, I should have here suspected him of some mistake. None of the other writers upon Fontainebleau allude to any *Rape of Proserpine* by Leonardo. Neither do the old biographers, Vasari among them, hint at such a subject having been treated by Da Vinci, and yet Del Pozzo's assertion is not entirely unconfirmed. De Pagave, who compiled a biography of Leonardo in the eighteenth century, speaks of a large drawing of a *Rape of Proserpine* which belonged to a member of the Melzi family, who caused it to be burnt by his chaplain (Amoretti, p. 112). It seems certain, then, that a drawing dealing with the same subject as the Fontainebleau picture, existed once at Milan (*Chronique des Arts*, 1898, pp. 266, 274, 275).

The *Fall of Phaëton*. According to Scannelli (1657), there was a picture of this subject in the Grand Duke of Tuscany's collection. The figures were very small, and the whole work was skilful and fantastic, although merely a sketch. It showed the extraordinary capacity of the master (*Il Microcosmo della Pittura*, pp. 140-141).

The *Battle of Anghiari*, lost, vol. ii., pp. 12-14, 133, 136-152.

*Vanity and Modesty*, Sciarra Colonna Collection, Rome, now generally ascribed to Bernardino Luini. According to the catalogue, the Museum of Ajaccio (1830) has a replica of this picture (no. 540).

The *Four Seasons*. Here we have to do with a purely fantastic ascription, to be found in the inventory of Fulvio Orsini (vol. xvi.) "Quadretto picciolo corniciato d'oro conte quattro Stagioni, d'acquarella tocca di biacca, di mano del Vinci" (valued at 6 scudi). De Nolhac; *Gazette des Beaux Arts*, 1884, vol. i., p. 427, *et seq.*

Leonardo has sometimes been credited with the composition reproduced by Marc Antonio in his *Triumph after Victory*. But the latest and most authoritative of Marc Antonio's biographers, M. Delaborde, claims it for Sodoma (*Marc Antoine Raimondi*, pp. 202-203).

## III

## PORTRAITS

*Portrait of a Jeweller*, Pitti Palace, seen to the waist, holding a jewel. By Rid. Ghirlandajo, according to the *Cicerone*.

Portrait of Marshal G. G. Trivulzio, once so called, in the Dresden Gallery. This has long

been recognised as a Holbein, representing Hubert Morett, an English jeweller [or the Sieur de Morette, a French gentleman who was at the English Court with Holbein.—ED.].

Portrait of the Cavaliere Morone, in the Casa Gallerati, at Milan, engraved in Rosini, vol. iv., p. 258. Not authentic.

The inventory (1743) of the Modena Gallery mentions "un quadro contenente un ritratto d'uno vecchio in mezza figura al naturale; opera di Leonardo da Vinci. Altro br. 1, on 3; largo, br. 1, on. 5." (Venturi, *la R. Galleria Estense*, p. 360.)

The *Boy with a Tablet*, exhibited at the Burlington Club in 1898 (no. 25 of the Catalogue). It was formerly in the collection at Hamilton Palace, and at the sale in 1882 was acquired by its present owner, the Earl of Carysfoot. It represents a naked boy, to the waist, holding up with a smile a double-hinged tablet [a sort of puzzle, which may well have been one of Leonardo's inventions.—ED.]. See Rigollot, no. 107, also Rio's *l'Art Chrétien*, vol. iii., p. 182. The workmanship points rather to Luini, some of whose frescoes offer similar types of children. Engraved by Bromley (1820).

The inventory of Fulvio Orsini (1600) ascribes several male portraits to Leonardo:

"Quadro corniciato d'oro, con un ritratto d'un giovine di casa Visconti, di mano di Leonardo da Vinci" (valued at 30 scudi).

"Quadretto corniciato d'hebano, di penna tocco di aquarella con la testa del Pico della Mirandola, di mano di Leonardo da Vinci (sc. 4)."—De Nolhac, *Gazette des Beaux Arts*, 1884, vol. i., p. 427, *et seq.* The same, *La Bibliothèque de Fulvio Orsini*, p. 33.

Portrait of Lodovico Sforza, Il Moro, lost, vol. i., p. 92.

Portrait of Beatrice d'Este, lost, vol. i. p. 110–112.

Portrait of Cecilia Gallerani, vol. i. p. 206–207.

Portrait of Lucrezia Crivelli, vol. i., p. 207.

Portrait of a young Princess, Ambrosiana, vol. i., p. 208–209. Rep. vol. i., pl. xiii.

Portrait of a woman known as *La Belle Ferronnière*, vol. i., p. xii.

Portrait of Isabella d'Este, cartoon, Louvre, vol. ii., p. 110–112. Rep., vol. ii., pl. 17. The so-called portrait of Isabella d'Este in the *Tribuna* of the Uffizi is ascribed by Frizzoni to a Veronese master (*Archivio storico dell'Arte*, 1891, pp. 164–169).

Portrait of *Mona Lisa*, called *La Joconde*, Louvre, vol. ii., p. 157–164. Rep., vol. ii., pl. 22.

Copies of the *Mona Lisa* are scarcely less numerous than those of the *Last Supper*. I may name the following:—Stuttgart Museum (no. 239, very mediocre); Munich Gallery (no. 1043, with dull carnations, which deprive it of

character); Madrid Gallery (no. 550, very smooth in execution and somewhat different in expression); Quimper Museum (according to M. Durand-Gréville); Tours Museum (two copies); Bourg-en-Bresse Museum (no. 133; 0,60 × 0,18 m.; a more or less free copy of the head only, brought from Italy in 1753, and presented by Baron Passerat de la Chapelle); Mozzi collection, Florence; collection in the Villa Sommariva, on the Lake of Como; Torlonia Collection Rome; Bridgewater Gallery, London. Copies were in the collections of Sir Abraham Hume and of the brothers Woodburn, in London. A free copy belongs to M. Martin-Leroy, of Paris. M. Mercier, of Niort, possesses an oil picture on panel, in which *Mona Lisa* is transformed into a Magdalen (red hair, circular nimbus, the pot of ointment, a cross resting on her left arm). Though somewhat cold in colour, it is not without charm. The lower part of the picture has been repainted in parts. The landscape includes a lake, like the original, and the same rocks. The best parts are the face and the neck, which are clear and transparent in colour. Behind the figure is a balustrade with the bases of two columns, as in the Louvre picture.

The Milanese collector Vallardi owned a cartoon in which Leonardo's original was reproduced with some variations in the background, (*Disegni di Leonardo da Vinci posseduti da Giuseppe Vallardi*; Milan, 1855, p. 65, with an engraving). This cartoon was knocked down for 1000 francs at Vallardi's sale in Paris in 1861 (*Gazette des Beaux Arts*, 1861, vol. ix., p. 65). It is to be noted, however, that in the description of this drawing we are told of a wheel on which *Mona Lisa*'s hands rest, while no attribute of the kind is to be discovered in the engraving published by Vallardi. [This may be a mistake on the part of the maker of the catalogue. In a drawing, presumably not in a perfect state, the framework of *Mona Lisa*'s chair might easily be taken for a wheel. ED.]

A female portrait which offers some analogies with the *Mona Lisa* and also with the *Bacchus* (see vol. ii., p. 160) is known by various replicas (Chantilly, the Hermitage, the collection of M. Chabrières-Arlès, at Paris; Fesch collection. The Chantilly cartoon is the most important. See vol. ii., pl. xix. It is in Italian chalk, boldly heightened with white. It differs from the Louvre picture in that the head, there slightly turned to our left, is seen almost full. The positions of the hands and arms are almost exactly the same in both. The shoulders are narrow and the arms very large, defects accentuated in the heavily painted copy in the Hermitage. The person represented in this cartoon is bold, earthly, provoking; while

*La Gioconda* seems withdrawn into an atmosphere of her own, and unapproachable. The Hermitage picture has grey drapery and a landscape background; at each extremity of the balustrade there is a portion of a column. The face is sweet and smiling, reminding us of Luini. The arms, on the other hand, are much too large, like those of the Chantilly cartoon. The example belonging to M. Chabrières-Arlès (who bought it in 1890, at the Piot sale, for 800 francs) is thus described in the sale catalogue: "no. 567. Portrait of Catharina di San Celso. This Milanese lady, famous for her beauty, is represented nude to the waist, her elbow on the arm of a chair, her body turned three-quarters to our left, her face looking straight out of the picture. Her fair hair, slightly waved, is plaited and tied on the top of her head. A brown drapery passes over her right arm and goes round her waist. The hands, crossed one over the other, are exactly similar to those of the *Mona Lisa* in pose." Piot ascribed both his picture and the one at the Hermitage to Luini; but there can be no doubt that they really proceed from the immediate entourage of Leonardo.

[Another version of the Chantilly and Hermitage pictures belongs to Lord Spencer, and was exhibited at the Burlington Club in 1898. Yet another, with a different background, belongs to Mr. Muir-Mackenzie, Q.C., of London.—ED.]

Anonymous portrait of a young woman (Rigollot, no. 58). The head droops. Her hair is partly arranged in a plait, which surrounds the head like a diadem; the rest falls in waves over her neck (Couché, *Galerie du Palais Royal*, vol. i. pl. 1). This portrait is now in the Bridgewater Gallery. It is generally ascribed to Luini.

Portrait of a woman, Augsburg Gallery (Rigollot, no. 65), facing the spectator. The best judges now agree to withdraw this portrait from the list of Leonardo's works (Woermann, *Geschichte der Malerei*, vol. ii. p. 551). To me it seems more like M. A. da Caravaggio than Da Vinci.

*Laura celebrated by Petrarch*, "drawn by Roger after the picture by Leonardo da Vinci in the Cabinet of the Citizen Masson, engraved by Massot." A handsome young woman, nude, seen front face to below the bust, no attributes, Leonardesque in type. I do not know what has become of this picture.

*La Monaca*, Pitti Palace (Rigollot, no. 66). There seems now to be a general agreement that this portrait is in the manner of Ridolfo Ghirlandajo. [Mr. Walter Armstrong ascribes it to Giuliano Bugiardini, as also does Mr. Berenson.—ED.]

*Female Portrait*, formerly in the Castelbarco collection. The ascription to Leonardo has now been superseded by that to Bernardino de' Conti, suggested by Morelli. (*Italian Painters*, vol. i. *Borghese and Doria-Pamfili Galleries in Rome*); Miss Ffoulkes's translation, p. 193. [This picture now belongs to Mrs. Alfred Morrison. It was at the Burlington Club Exhibition in 1898.—ED.]

So-called portrait of Joanna of Aragon, Doria Pamfili Palace, Rome, falsely ascribed to Leonardo (see Morelli, *Italian Painters*, vol. i. p. 311; Miss Ffoulkes's tr.).

Female portrait, Czartorisky Collection, Cracow. This panel (0 m. 56 cm. × 0 m. 41 cm.) contains the portrait of a young woman, seen to the waist, and holding in her arms a weasel or ferret, or some other animal of the same family. Her look is frank and lively, but her features have a somewhat haggard cast. She is turned slightly to the right. Her fantastic head-dress is knotted beneath the chin and bound by a *ferronière*, whence the name by which the picture is generally known. A sort of white veil falls over her forehead. A necklace hangs down over her bosom, which the low-cut bodice leaves exposed. Her somewhat fantastic dress has large slashed sleeves. The right hand rests upon the little animal. Herr Müller-Walde does not hesitate to pronounce this portrait authentic. I have some difficulty in accepting his opinion. The insignificance of the expression and meanness of the execution are most un-Leonardesque. The picture is reproduced in *Graphischen Künste* for 1892 (part v.), and in Rosenberg's *Leonardo da Vinci*, p. 44.

A mysterious female portrait which formerly belonged to Morelli, who left it to Madame Minghetti, has now found a home with Mr. Davis, an American collector. I only know it from a photograph. It would be rash for me to pronounce an opinion without having seen the original; but, upon such connoisseurs as have seen it, it has produced the effect of a modern forgery, or pasticcio.

Leonardo painted the portrait of a laughing woman. This portrait was copied by Fra Girolamo Monsignori, whose copy was in the Milanese "Zecca" in 1560 (Vasari, vol. vi., p. 491).

Portrait of a young woman known as *Colombina*, Hermitage; formerly in the Palais Royal collection. A young woman, seated, nude to the knees, holding in her right hand a campanula, or some such flower, on which her eyes are fixed. Her left hand lies on her knees, and holds a bouquet of the same flowers. Ascribed to Solario by Crowe and Cavalcaselle and Clément de Ris; to Luini by Bruiningk and Somoff, who give a photogravure of it in their *Catalogue de la Galerie des Tableaux* (S. Petersburg, 1891).

The inventory of Fulvio Orsini mentions a "quadretto corniciato d'oro, con una donna che dorme et una figura che tiene nelle mani il pastorale et la palma, di mano di Leonardo da Vinci," valued at 15 scudi (De Nohac : *Gazette des Beaux Arts*, 1894, vol. i., pp. 427 et seq.).

A fantastic composition, chiefly known by Agostino Veneziano's engraving—three grotes-

que individuals, seen to the waist—is commonly ascribed to Leonardo. But a glance at this print, with its date of 1516 (when Leonardo was still alive), is enough to convince us that it reproduces a Flemish, and not an Italian, original. The Italian inscription—"chi non ci vol veder si cavi gli occhi"—and the monogram L.D.V. must not be allowed to mislead us.

## B

## SCULPTURE

Busts of women laughing. Lost, vol. i., p. 56.

Busts of children. Lost, vol. i., p. 56.

Bust of Christ. Lost, vol. i., pp. 56, 159.

S. Jerome, vol. i., p. 159.

Bust of S. John the Baptist, in terra cotta, in the South Kensington Museum. Ascribed to Leonardo, vol. i. pp. 49, 57.

The equestrian statue of Francesco Sforza. Destroyed, vol. i., pp. 143-156, 160, 213, 221; vol. ii., pp. 5, 109, 240.

The equestrian statue of Marshal Trivulzio, vol. i., pp. 156-157.

*Discord*. Bas-relief in the South Kensington

Museum. A false attribution, vol. i., pp. 22, 158-159.

A bas-relief with some points of analogy with the South Kensington *Discord* was discovered in the Carmine, at Venice, by Dr. Bode. The subject is a deposition from the Cross, and the whole is very supple and free in modelling. In one corner kneel two donors, the man at once showing a likeness to Francesco Sforza and, by his broken nose and haughty eyes, to Federigo d'Urbino; the lady is of a liberal scantling. (*Archivio storico dell' Arte*, 1893, p. 77-84; see also above, vol. i., p. 22.)

*Scipio*. School of Leonardo. Rattier collection. Reproduced, vol. i., pl. v.

## C

## DRAWINGS

No complete critical study of Leonardo's drawings has yet been made. The few efforts in that direction, those of Morelli (*Die Galerien Borghese und Doria-Pamfili in Rom*, p. 225-227), Lübke, (*Geschichte der italienischen Malerei*, vol. ii., p. 79), and Frizzoni (*Arte e Storia*, 1888, p. 71) deal only with a small number of examples. Sig. Uzielli's catalogue, again, is confined to the drawings at Turin, Venice, and Florence (*Ricerche*, vol. ii., p. 257, et seq.). As for Weigel's catalogue (*Die Werke der Maler in ihren Handzeichnungen*; Leipsic, 1865, p. 346-362), it is no more than a mere enumeration of those drawings ascribed to Leonardo which have been reproduced by engraving or photography; no attempt is made to separate the wheat from the tares.

This lack of preparatory material gives me the right to beg the reader's indulgence for the attempt at a catalogue I here venture to submit.

I have done all I could to make it complete and definitive, but, seeing how novel the attempt is, I have to put forward my conclusions with

extreme reserve. Nothing is more difficult than to draw the line between Leonardo's own drawings and the innumerable copies made in his studio or by his more or less immediate disciples. He sometimes appears to have even made copies himself of his own drawings.

Many drawings, not by himself, reproduce, no doubt, originals which have been lost, and so must be taken into serious consideration.

I must point out, too, that many authentic drawings have been more or less retouched, which may have led certain critics to take them for copies.

Few names have been more popular with forgers of every kind than that of Da Vinci. Whole collections of bogus Leonardos were created in the eighteenth century. His caricatures, especially, were copied and imitated on a vast scale. A series of pen drawings, passing under his name, was sold for 1,650 francs at the A . . . sale in 1879. It was engraved by Caylus (Roger Portalis and Beraldi, *Les Graveurs du dix-huitième Siècle*, vol. i., p. 343).



In cataloguing Leonardo's drawings I have adopted the following classification:—Old Testament—Gospels—History of the Saints—Mythology and History—Standing figures—Heads of children, youths, men, old men, women—Grotesque heads—Animals, flowers,

landscapes—Fragments and various subjects.

In order to keep the size of this volume within bounds, I have only described such drawings as do not already figure in some easily accessible catalogue.

## ITALY

### FLORENCE.

#### *The Uffizi.*

The drawings in the Uffizi have been described by Léon Lagrange (*Gazette des Beaux Arts*, 1862, vol. xii. p. 546-548); by Nerino Ferri (*Catalogo delle Stampe e Disegni esposti al pubblico nella R. Galleria degli Uffizi*, p. 25-28) Florence, 1881, and *Disegni antichi e moderni posseduti dalla Galleria degli Uffizi*, part iii. p. 161-165 Rome, 1894; and by Uzielli (*Ricerche*, 1st ed., vol. ii. p. 262-269). According to Morelli, only five of the Uffizi drawings are authentic, those numbered 423, 436, 446, and 449, and the landscape dated 1473. But this assertion has been refuted by Ferri, who has proved that many drawings thus rejected as false bear notes in Leonardo's handwriting.

No. 421. Madonna, the Child holding a cat (Braun, no. 447). A forgery, according to Morelli; but I agree with Ferri in accepting this drawing as authentic; it is most refined in execution.

No. 422. Madonna, the Child sitting on his mother's lap and raising his left hand. Nothing in common with Leonardo (Braun, no. 440).

No. 430. Madonna, seen to the waist, the Child upon her knees (Braun, no. 440). Doubtful.

No. 426. Study for the head of S. Anne in the cartoon belonging to the Royal Academy, London (Braun, no. 436). See vol. ii., p. 128.

No. 436. Study for the *Adoration of the Magi*, vol. i., pp. 61-70.

No. 435. Fight between a lion and a dragon (Braun, no. 451). This drawing seems to be a Leonardo, but has been heavily re-touched. There is a copy or replica in the Staedel Institute at Frankfurt-a-M. An engraving of a fight between a lion and a dragon, having analogies with Leonardo's drawing, was published in 1892 by the International Chalcographical Society (no. 6). An engraving of the same subject by Zoan Andrea is in existence (Passavant, vol. v., p. 84).

No. 150. Sketch for a combat of horse; has to do with the *Battle of Anghiari*.

No. 8950. Study for a horseman fighting; has to do with the *Battle of Anghiari*. Doubtful.

No. 204. Nude figure, seen to the waist;

architectural notes and little figures; on the reverse, sketches of machines.

No. 447. Man standing, seen from behind; he wears a biretta. Two heads in profile, a dragon's head, and various sketches of machines, with notes in Leonardo's writing.

No. 432. A naked child, with puffy cheeks, sitting on the ground; its arms raised. Gouache. In the manner of Mantegna. Nothing in common with Leonardo (Braun, no. 433). On the back, *A Virgin suckling the Child Jesus*.

Heads in profile. Red chalk. Later than Leonardo, and not even of his school (Braun, nos. 443-446).

No. 208. Portrait of Francesco Sforza, Count of Pavia. Attributed to Ambrogio de Predis by Morelli and Ferri.

No. 440. Profile head of a man, turned to the right.

No. 449. Profile head of a beardless man, turned to the right.

No. 427. Bust of a young man, head in profile, turned to the right; a biretta on his head. On the back, bust of a young woman, profile resembles the portrait numbered 419 (Braun, no. 449). Doubtful.

No. 423. Old man, seen to the waist, and profile of a young man, facing each other. Red chalk (Braun, no. 450).

No. 424. Head of a bald and beardless old man, profile to the left (Braun, no. 438); reproduced, vol. i. p. 9.

No. 442. Head of a bald old man, closely shaved; profile to the left. Manner of Leonardo.

No. 446. Profile heads of an old and a young man, with the date 1478. Reproduced, vol. i., p. 48.

No. 414. Bust of a young woman, the arms crossed, the curled hair kept in place by a toque (Braun, no. 434). Doubtful. Rather Florentine than Milanese.

No. 419. Portrait of the Marchesa Isabella d'Este. Red chalk (Braun, no. 442). A heavy-handed copy of the drawing in the Louvre (see vol. ii. pl. 17). The refinement of the modelling has entirely disappeared. Another copy (no. 209) is done in black chalk and wash on yellowish paper. Two other copies in red chalk are in the print room at Munich.

No. 425. Young woman, full face, seen to

the bust, the eyes dropped, the nose rather short, the chin square, the wavy hair very slightly indicated. Greenish paper (Braun, no. 435). Reproduced, vol. i., pl. 3.

No. 428. Head of a young woman, with long hair. According to Bayersdorf this is a study for the Virgin in the Louvre *Annunciation*; according to Wickhoff, a juvenile work of Verrocchio; according to Morelli, a Flemish imitation of Verrocchio.

No. 429. Three-quarters head of a young woman, the eyes cast down, a veil over the forehead. School of Leonardo (Braun, no. 441).

No. 431. Three-quarters head of a young woman, drooped towards the right. Certainly not by Leonardo (Braun, no. 432; Rosenberg, *Leonardo da Vinci*, p. 98).

No. 44. Veiled head of a woman; manner of Leonardo.

No. 8949. Head of a woman, in profile. Doubtful.

No. 420. Study of drapery for the lower part of a kneeling figure (Braun, no. 447). Doubtful. Should be compared with the Louvre drawing no. 182, Braun.

No. 433. Study of drapery for the lower part of a standing figure, facing to the front (Braun, no. 430).

No. 434. Study of drapery for a semi-nude kneeling figure, turned to the left (Braun, no. 431).

No. 437. Study for the lower part of a seated figure; one leg crossed upon the other. To be compared with no. 422 (Braun, no. 437).

No. 202. Three studies of men's legs. Doubtful.

No. 203. Studies from skeletons. Doubtful.

No. 8. Landscape, dated 1473. Pen (reproduced, vol. i., p. 29).

#### MILAN.

##### *Biblioteca Ambrosiana.*

The Ambrosiana, which boasts so many souvenirs of Leonardo, is certainly one of the poorest of all collections in authentic drawings by the master. Among the numerous drawings in red chalk, in silver point, in Italian chalk, and in ink, which are exhibited as the work of Da Vinci (several of them bearing notes in Leonardo's handwriting) scarcely more than five or six can justify their pretensions. Morelli, with whom I am happy to be for once in agreement, puts the total of genuine drawings at ten. The rest are the work of forgers and copyists, who have set themselves with misplaced ingenuity to imitate the founder of the Milanese school.

We must note that this collection seems to have been formed at the same time as the so-called Vallardi album, of the Louvre. The

same discordant elements are found in both, drawings by Pisanello, for instance, elbowing those by da Vinci. The same combination occurs in the Duke of Devonshire's collection at Chatsworth.

The collection of drawings formed by Padre Resta, also in the Ambrosiana, is open to still more serious criticism. I doubt whether it contains more than six original drawings; and in giving even this small total, I am speaking generously. The rest of the collection is made up of coarse *pasticci*, executed, apparently, at the end of the seventeenth, or beginning of the eighteenth centuries, after the chief masters of the Renaissance. The "Indice del Libro intitolato Parnaso de' Pittori, in cui si contengono varj Disegni originali raccolti in Roma da S. R." (first ed. 1707; second ed., Perugia, 1787, pp. 29, 33, *et seq.*), contains descriptions of several Leonardo drawings inserted in the collection. This work suggests the question, 'Was the Rev. Father Resta dupe or duper?' (See the *Lettere artistiche inedite*, published by the Marchese Campori, p. 476, *et seq.*)

Resta plumed himself on possessing the portrait of the Prior of Santa Maria delle Grazie (*Indice*, p. 33, second ed., Perugia, 1787). I do not know what has become of it.

Most of the Ambrosiana drawings have been engraved, and published by Gerli (1784, a new edition in 1830). They have also been photographed by Marville, Brogi, and Braun.

I. Head of the Virgin, inclined (*Saint Anne*). Black chalk. Doubtful. (Braun, no. 66.)

II. The Virgin sitting on the ground before the Infant Christ. False (Braun, no. 88).

III. Head of the Virgin, inclined. Study for the Virgin's head in Solario's *Vierge au Coussin vert* (Braun, no. 90).

IV. Head of the Virgin and study of the Infant Christ for the *Vierge aux Rochers* (Braun, no. 31).

V. The Infant Christ seated, facing the spectator, and holding a cat. Red chalk (Braun, no. 47).

VI. Three-quarters head of a child, turned to the left. Recalls the studies for the Infant in the *Saint Anne* (drawing at Chantilly). Gerli, pl. xlv; vol. ii., p. 129.

VII. Studies from the heads of S. Peter and Judas. Red chalk. False (Braun, no. 63).

VIII. The Dead Christ, half-sitting. False (Braun, no. 87).

IX. Head of an angel. Study for the angel in the *Vierge aux Rochers*, inscribed, "Lucido dell' originale smarrito" (Gerli, pl. xxi, Braun, no. 27).

X. Torso of S. Sebastian, red chalk. False (Braun, no. 77).

XI. Study for S. Jerome (Braun, no. 26).

XII. Study for a head of *Leda*, three-quarters

to the left, the eyes drooped. Red chalk. Doubtful.

XIII. Two studies for a fight between a horseman and a dragon. False. (Braun, no. 43.)

XIV. A horseman in his saddle armed cap-à-pie, his visor down and his lance "carried"; red chalk (Braun, no. 49). Has nothing to do with Leonardo. Some critics have seen in this heavy man-at-arms, with closed visor and carried lance, a reproduction of the famous equestrian statue. But even if we accept the drawing as by Leonardo—which I do not—it cannot be a sketch for a monumental statue. The mere fact that the horseman's face is masked by his visor shows that it can have nothing to do with Sforza's project for the glorification of his family.

XV. Galloping horses. Recalls the wild cavalcades of Raphael at Oxford and Lille (Gerli, pl. xii.). Part of the male figure turned to the right recurs in Dr. Richter's plate ix.

XVI. Male figure seated. Probably by Filippino Lippi. (Gerli, pl. iv.)

XVII. Figure of an old man, nude, bent forward, his right arm outstretched, his left holding a staff. Mr. Müller-Walde sees a connection between this figure and the *S. Jerome* painted about 1475, by Perugino, in the *Crucifixion* of the church of San Giovannino della Calza, at Florence. But the identity of motive is not striking; *S. Jerome* lays his hand upon his breast to declare his veneration. Leonardo's figure, on the contrary, stretches his out, to point to someone or something. (Braun, no. 41.) Should be compared to the Windsor drawing numbered 47 in the Grosvenor Gallery Catalogue.

XVIII. Nude man, seated, seen in profile, his head in his hands. (Braun, no. 40.)

XIX. Two standing male figures, nude; no heads. A lion, red chalk. False. (Braun, no. 83.)

XX. Standing male figure, nude, the left arm resting on the hip, head in three quarters profile. Recalls the drawing after Michelangelo's *David* (see vol. ii., p. 137), except that in the *David* the left arm is bent upon the breast, and the head shown in profile. (Gerli, pl. xix.)

XXI. A woman kneeling, undraped; a satyr attacking a goat. False. (Braun, no. 42.)

XXII. Head of a child, turned three-quarters to the left. False. (Braun, no. 29.)

XXIII. Bust of a child, with long hair; front face. False. (Braun, no. 102.)

XXIV. Profile of a child, turned to the right. Portrait of the young Maximilian Sforza. Has to do, as Morelli pointed out, with the *Family of Lodovico Sforza* in the Brera (see vol. ii. p. 41), ascribed to Zenale. (Gerli, pl. xvii; Braun, no. 38.)

XXV. Young man with a beard and disordered hair, in profile to the right. Red chalk. Doubtful. (Braun, no. 61.)

XXVI. Portrait of a man, to the waist, almost full face; long falling hair; soft hat, with turned up brim. An unpleasant face, in which I have some difficulty in recognising the hand of Leonardo. (Brogi, no. 6303; Braun, no. 104.)

XXVII. Portrait of a man, beardless, seen in profile, wearing a hat; turned to the left. Red chalk. False. (Braun, no. 62.)

XXVIII. "Lo retrato de lo illustre signore Prospero Cholona generoso chapitadeo generale de tuto lo exercito de la Cesarea Maestade de lo Imperio fato in Papia in chasa de la Magnica Madona Leonora Vesconte (?) l'ano de la (?) 1523." This date is enough to exclude Leonardo as the possible author of this dry and poor drawing. It is possibly not even Italian. Red chalk. (Braun, no. 79.)

XXIX. "Retrato del generoso signore Marchese de Peschara, Chapitaneio de Hômi d'arme ispanyey. Retrato in Placentia in la citadela, a la tabula del Reverendissimo Episcopo et Governatore de Placentia, Monsignor Gorra, in sabato el di secondo de zenaro del 1524." Red chalk. (Braun, no. 80.) Same observations as above, no. XXVIII.

XXX. Head of a beardless man; profile to the left; he wears a biretta. Red chalk. False. (Braun, no. 78.)

XXXI. Bust of a beardless man, with bare neck; three-quarters to the right. Red chalk. False. (Braun, no. 76.)

XXXII. Study of a beardless head, turned three-quarters to the right. (Braun, no. 101.) This is a study by Filippino Lippi for his *Adoration of the Magi* in the Uffizi. It is the last figure but one on the right, in the foreground.

XXXIII. Head of a man of mature age, turned three-quarters to the right; he wears a forked beard, and his hair is in disorder. The same head in profile. (Gerli, pl. iv, xv.)

XXXIV. Profile head of a man, with a sneering smile; he wears a biretta. Red chalk. (Braun, no. 68.)

XXXV. Bust of a man, in profile to the right; laurels about his head, and his breast covered by a cuirass. Doubtful. (Braun, no. 35.)

XXXVI. A beardless man, his hair on end; profile to the left. Red chalk. (Braun, no. 48.)

XXXVII. Portrait of Leonardo himself; profile. (Braun, no. 45.) Copy of the Windsor portrait.

XXXVIII. Supposed portrait of G. Leno. Red chalk (Braun, no. 84.) (See vol. ii., p. 196.)

XXXIX. Head of a beardless and bald old man, with prominent nose and chin; profile to the right. Doubtful. (Gerli, pl. xxxii.)

XL. Old man's head, beardless, the head covered with a kind of hood; profile to the right. Doubtful. (Braun, no. 37.)

XLI. Portrait of an old man, by Francesco Melzi. (Braun, no. 54.) (See vol. ii., p. 209.)

XLII. A beardless old man, with thick hair; full face, the eyes raised. Red chalk. (Braun, no. 58.)

XLIII. Head of a beardless old man, with thick hair; turned three-quarters to the left. False. (Braun, no. 89.)

XLIV. Three-quarters head of a bald and beardless old man, with a hooked nose. "Ritratto del m<sup>o</sup> di cam. del Re Franc." The same head appears, in full face, in a drawing in the Royal Library at Turin. Red chalk. (Gerli, pl. xxxii. Braun, no. 81.) See vol. ii., p. 205.

XLV. Head of a young woman, three-quarters profile to the right; wavy hair, a double necklace about her throat. Silver point. Good drawing of the Milanese school. (Braun, no. 33.)

XLVI. Profile head of a young woman, turned to the right. Doubtful. (Braun, no. 36.)

XLVII. Head of a young girl, full face. Either a free copy or the original of the so-called head of *Bacchus* preserved in the Accademia at Venice. It is without the crown of vine leaves, however, and the hair is more curly. (Brogi, no. 7407; Braun, no. 50.)

XLVIII. Bust of a young girl, front face. Red chalk. (Braun, no. 52.)

XLIX. Head of a young woman, three-quarters profile to the left. Silver point. Doubtful. (Braun, no. 28.)

L. Female portrait, profile to the left, the hair hanging in loops. Red chalk. Doubtful. (Braun, no. 55; should be compared with Braun, no. 65.)

LI. Two heads and two busts of young women, profile and front face. Red chalk. False.

LII. Three heads of young women, two in profile, one front face; a grotesque head; a woman shown to the waist. Red chalk. False. (Braun, no. 57.)

LIII. Head of a young woman, three-quarters turned to the left. Unfinished. Red chalk. (Braun, no. 59.)

LIV. Bust of a young girl, undraped, front face, the eyes raised. Red chalk. Nothing to do with Leonardo.

LV. Three-quarters head of a young woman turned to the left. Red chalk. Doubtful. (Braun, no. 85.)

LVI. Two heads of women or angels. Red chalk. Not by Leonardo; in the manner of Ghirlandajo. (Braun, no. 86.)

LVII. Three-quarters head of a woman turned to the right. Red chalk. (Braun, no. 25.)

LVIII. Female portrait, front face, seen to

the waist, the eyes cast down. Sometimes called the Marchesa Isabella d'Este. Doubtful. (Braun, no. 105.) Vol. ii., p. 246.

LIX. Profile portrait of a woman, similar to no. lv. False. (Braun, no. 65.)

LX. Three profiles of young women and two of old men; grotesques. Pen. Doubtful. (Braun, no. 100.)

LXI. Grotesque heads. False. (Braun, no. 44.)

LXII. Grotesque heads, in profile to the right. Red chalk. False. (Braun, no. 46.)

LXIII. Grotesque head of an old man, beardless, bald, with atrophied chin. Red chalk. (Braun, no. 51.)

LXIV. Seven grotesque heads and the head of a young girl. Red chalk and false. (Braun, nos. 69—75.)

LXV. Grotesque head of a man, receding brow, the lips enormous; profile to the right. Red chalk. Doubtful. (Braun, no. 67.)

LXVI. Sixteen grotesque heads. Pen. Doubtful. (Braun, nos. 91—99.)

LXVII. Grotesque head of an old woman, three-quarters to the right. Copy of the head which figures in the sheet of five caricatures reproduced vol. i., p. 249. (Gerli, pl. xxvi.)

LXVIII. Hand holding a baton. Copy of the drawing in the Royal Library at Turin. (Braun, no. 39.)

LXIX. Study of a torso and legs. Red chalk. False. (Braun, no. 82.)

LXX. Two rearing horses. Horse seen from behind, etc. Red chalk. False. (Braun, no. 64.)

LXXI. Head of a horse, three-quarters to the left. False. (Braun, no. 103.)

LXXII. Three horses' heads. Copy of the engraving in the British Museum.

The *Codex Atlanticus* only contains a small number of figure-drawings. On the other hand, sketches of machines and of ornaments of all kinds are sprinkled lavishly over its pages; they are rapid sketches, showing extraordinary certainty of intention and facility of hand. A certain number of false drawings seem, however, to have found their way among them.

#### ROME.

##### *Borghese Gallery.*

Head of a young woman, front face, the head slightly drooped, the hair knotted up at the height of the ear. (Braun, no. 43082.) This portrait and that in the Ambrosiana appear to me to reproduce the same model. (Rosenberg, *Leonardo da Vinci*, p. 94—96.)

#### TURIN.

##### *The Royal Library.*

The drawings in this collection were reproduced in 1888 by Signor Carlevaris (*I disegni di*

*Leonardo da Vinci della Biblioteca di S. M. riprodotti in Fototipia da Pietro Carlevaris*). They are described in Uzielli's *Ricerche*, vol. ii. p. 269-272.

I. Portrait of Leonardo, front face, red chalk. (A copy in the Accademia at Venice; frontispiece, vol. i.)

II. Study for the angel in the *Vierge aux Rochers*. See vol. i., p. 164.

III. Head of a beardless man, full face, with indication of measurements; lower down, an eye. Pen; autographic notes on the dimensions of the different features. (Uzielli, no. 4.)

IV. Study of two male figures, seen from behind, one holding a sword; muscles very strongly marked. At the side, smaller nude figures, one with a hand upon his hip, another with a hand upon the head of a child. Lower down, a man, in profile, wielding an object which it is impossible to identify. Finally, three horses, one rearing; the second, with a cavalier on his back, walking; the third, also bearing a rider, galloping. Study for the *Battle of Anghiari*. Pen. (Uzielli, no. 7.) See vol. ii., pp. 149 (note), 153.

V. Two eyes. Autographic notes. Pen. (Uzielli, no. 6.)

VI. Studies of legs for standing figures. Pen. (Uzielli, no. 8.)

VII. Fragmentary studies of horses. Silver point.

VIII. Studies of horses. Fore-legs. Silver point. (Uzielli, no. 9.)

IX. Studies of horses. Quarters and hind legs. Red chalk. (Uzielli, no. 10.) These hind quarters of horses should be compared with those at Windsor. See vol. ii., p. 274.

X. War machines, chariots armed with scythes and drawn by two horses each. The one above moves to the right, the one below to the left. Autographic note. Sepia. (Uzielli, no. 13.)

XI. Two insects. Pen. (Uzielli, no. 11.)

XII. Bust of a beardless man, in profile, turned to the right; extremely vigorous in expression, a laurel branch about the head. Red chalk. The same head, but without the laurel, is to be found at Windsor (Grosvenor Gallery Catalogue, no. 20). In the Turin drawing the expression is more trenchant; this is perhaps the later drawing of the two. (Uzielli, no. 5.) Reproduced, vol. i., p. 233.

XIII. Three heads of the Apostles, for the *Last Supper* (heads of Orientals, according to Dr. Richter, pl. cxx.); the head to the left in profile, the one in the centre three-quarters, the one to the right full face. Red chalk. (Uzielli, no. 3.)

XIV. A bald and beardless old man, nude to the knees; he is seated, has an ample cloak about him, and extends his right hand. Red

chalk. The same figure occurs at Windsor. (Grosvenor Gallery Catalogue, no. 64.—Uzielli, no. 14.)

XV. Head of an old man, bald and beardless the nose hooked at the end. Red chalk. The same model as in the drawing published by Gerli, pl. xxxii. (Uzielli, no. 15.)

XVI. Bust of a young man or young woman, the head bent, the eyes drooped; long hair, retained by a fillet. Red chalk. A copy. (Uzielli, no. 16.)

XVII. Head (of Bacchus?) with a wreath of vine leaves. Silver point. School of Leonardo. (Uzielli, no. 17.)

XVIII. Study of a hand holding a baton. (Müller-Walde, fig. 56.) The original of the drawing (no. lxviii.) in the Ambrosiana.

#### VENICE.

##### *Accademia delle Belle Arti.*

The drawings in the Venetian Academy are described, but without much attempt at criticism, in the Marchese Selvatico's *Catalogo delle opere d'arte contenute nella Sala delle Sedute dell' I. R. Accademia di Venezia* (Venice, 1854); and in the *Catalogue des Dessins originaux de Raphael, Léonard de Vinci, etc. etc., conservés à l'Académie des Beaux Arts à Venise et exécutés en photographie par Antoine Perini* (Venice, 1865, nos. 171-191). They have been photographed by Perini, Braun, and Naya, and catalogued in Uzielli's *Ricerche* (vol. ii. p. 273-282).

The nucleus of the collection belonged successively to Cardinal Cesare Monti, to de Pagave, by whom it was considerably augmented, to Bossi, the author of *Del Cenacolo*, and finally, to the Abbé Celotti, who sold it to the Austrian Government for the Venetian Academy.

I. Study of the Child Jesus for the Louvre *Saint Anne*. Red chalk. Identical with the drawing engraved in Gerli's plate ix, except that here the two children, instead of being placed below the fragments of feet, hands, arms, heads and torsoes, which fill the rest of the paper, are placed above them. Much less rude in execution than the drawing shown by Gerli. In the Chantilly drawing the undraped female torso (study for the figure of the Virgin) is wanting. This drawing bears an autographic note by Leonardo on the back. (Braun, no. 41; see also the *Gallerie nazionali italiane*, vol. ii. p. 44. See vol. ii., p. 129.

II. Study for the *Saint Anne*. Pen. See vol. ii., p. 127. (Bossi, *Del Cenacolo*, p. 231; Braun, no. 39.)

III. Study for the head of S. Anne. Red chalk. Doubtful. (Braun, no. 42.)

IV. *Saint Anne*, similar to the Louvre picture. Red chalk, not by Leonardo. (Braun, no. 40.)

V. Head of Christ, bent, apparently, under the weight of the cross; three-quarters face; beard rather long, flowing hair; haggard expression. Silver point, on 'greenish' paper. See vol. i., p. 88. (Braun, no. 53.)

VI. Study for the *Last Supper*, autographic notes. Red chalk. See vol. i., p. 185. (Braun, no. 58.)

VII. A naked child seated on the ground; bust profile of a beardless man, with long hair, hooked nose, and high cap (the Emperor Maximilian); the profile of a young woman, turned to the left, wearing a kind of turban and a necklace about her throat. Greenish paper. A beautiful and refined drawing, but in reality the work of Cavallari, who copied the original by Ambrogio de Predis. See vol. i., p. 104. (Gerli, pl. iii\*; Braun, no. 55.)

VIII. Three women dancing, with the head of a fourth. Pen. Archaic, with involved draperies. Recalls Verrocchio, but is more refined. See vol. i., p. 36. (Braun, no. 49.)

IX. Head of a beardless old man, seen in profile; for the *Battle of Anghiari*. (See vol. ii., p. 133.) (Braun, no. 46.)

X. Various sketches for the *Battle of Anghiari*. (Richter, plate liii-lv.) See vol. ii., p. 148.

XI. Male figure, nude, standing in a circle, the arms stretched out to the circumference. Long notes above and below in the handwriting of Leonardo. See vol. i., p. 241.

XII. Three-quarters head of a beardless young man, turned to the left, the hair in disorder. Red chalk. (Braun, no. 54.)

XIII. Full-face portrait of Leonardo. Red chalk. Probably copied from the one at Turin. (Braun, no. 44.)

XIV. Bust in profile of an old, bald, and

beardless man, turned to the right. Some indications of measurements. Should be compared with the drawing at Windsor (Richter, pl. li.). At one side the profile, to the waist, of a naked man, with a suggestion of drapery on the shoulder. Pen and chalk. (Richter, pl. ix. Braun, no. 38.) The naked male figure is copied in red chalk in a drawing in the Ambrosiana. (Gerli, pl. ii\*.)

XV. Head of a young woman (study for a Madonna); three-quarters view, turned to the right, the eyes looking down. Red chalk. (Braun, no. 47.)

XVI. Bust, front face, of a young woman, with long hair, and crowned with vine leaves (Bacchus?). Too weak for Leonardo; seems to me rather the work of a pupil. (Braun, no. 52; C. Brun, *Leonardo da Vinci*, p. 13.)

XVII. Grotesque head of an old man, with deformed mouth and nose. Pen. (Gerli, pl. v\*; Braun, no. 48.)

XVIII. Caricatures. Seven heads in profile, three of them side by side. Pen. (Braun, no. 50.)

XIX. Caricatures. Five heads, four in profile and one a three-quarters view. Pen. (Braun, no. 51.)

XX. Caricature. Head of a woman, in profile to the left. Red chalk. Doubtful. Monogram formed of a D, an L, and a V. (Gerli, pl. v\*; Braun, no. 56.)

XXI. Anatomical studies. A torso, a head in profile, a leg. (Braun, no. 38.)

XXII. Anatomical study. A pair of shoulders and arms. Pen. Very doubtful. (Braun, no. 53.)

XXIII. Cavalier attacking a foot soldier, who defends himself with the help of a conical shield. Various arms. Pen. (Gerli, pl. vii\*.)

## FRANCE

### *The Louvre.*

The Louvre drawings have been for the most part described in the catalogue of M. Reiset, in those of M. de Tausia (*Notice des Dessins de la Collection His de la Salle*, 1881. *Dessins . . . Notice supplémentaire*, 1887. *Deuxième Notice supplémentaire*, 1888), and in the *Catalogue sommaire des Dessins exposés dans les Salles du premier et du deuxième étage*.

I. *Samson and the Lion*. Pen drawing, more akin to the school of Raphael than to that of Leonardo. Portfolios, 2519, 1643.

II. *Madonna and Child*. His de la Salle collection, no. 101, ascribed to Raphael by de Tausia and Morelli (*Die Galerien Borghese und Doria Pamfili*, p. 197). M. de Tausia points out the analogy between this study and the Leonardo drawings in the British Museum.

III. *Head of Saint Anne*. After the picture in the Louvre. (Cat. Reiset, no. 393.) Ascribed to Daniele da Volterra. (Braun, no. 213.)

IV. Study for the drapery of the Virgin in the *Saint Anne*. (Cat. Reiset, no. 391.) According to Reiset this drawing has been worked upon by a more modern hand. Reproduced, vol. ii., pl. 18.

V. Virgin seated, holding the Infant Christ; in front the little S. John mounted upon a lamb. Another figure lower down. Nothing to do with Leonardo. (Braun, no. 189.)

VI. Three heads of the Infant Christ, profile "perdu," on three distinct sheets. Greenish paper. Studies for the Child in the *Vierge aux Rochers*. Vallardi collection, Tausia, nos. 2025-2026. Reproduced, vol. i., pl. 7, 8.

VII. Head of a child, cut out. Three-quarters face turned to the right. Study for the S. John the Baptist in the *Vierge aux Rochers*. (De Tausia

[no. 2024] is mistaken in referring it to the Virgin of Sant' Onofrio.) Vallardi collection. See vol. i., p. 176.

VIII. *Holy Family*. The Virgin, seated in her mother's lap, holds the Infant Christ in her arms. He turns round to the right to look at S. Anne. Although the subject is similar to that of the *Saint Anne*, the two compositions differ considerably. (De Tauzia, *Notice des Dessins de la Collection His de la Salle*, no. 120.)

IX. *Holy Family*. A drawing done with a very coarse pen. Doubtful and uninteresting. (Cat. *Sommaire des Dessins*, no. 2302.)

X. Study for a *Holy Family*. The Virgin seated on the ground, the Child on her knees, the little S. John to the right. On the left a slight sketch of a child. Pen drawing, very slight, but full of distinction and refinement. (Vallardi collection, de Tauzia, no. 2023.)

XI. Madonna and Child. (Vallardi collection. School of Leonardo de Tauzia, no. 2029.)

XII. Study for the *Adoration of the Magi*. (Former Galichon collection.) See vol. i., p. 65.

XIII. Studies for the *Adoration of the Magi* and for the *Last Supper*. Pen upon lead pencil. Reverse of the last drawing. (See vol. i., pp. 61, 72, 80, 177.) Formerly in the collections of Sir Thomas Lawrence and the King of Holland. (Tauzia, *Dessins, deuxième Notice supplémentaire*.)

XIV. Standing statue of Venus Genetrix, no head. Copy after the antique. Red chalk. Has nothing to do with Leonardo or with his school (Catalogue *sommaire des Dessins*, no. 2303). Berenson ascribes this drawing to Jacopo de' Barbari (*Gazette des Beaux Arts*, 1896, vol. ii. (p. 320-330), but I cannot subscribe to any such attribution.

XV. *The Rape of Ganymede*. Nothing to do with Leonardo. (Braun, no. 183.)

XVI. Two men fighting, undraped, the one half extended on the ground, the other kneeling on one knee and raising a dagger. After the *Battle of Anghiari* (?). Red chalk. Doubtful. (Braun, no. 196.) See vol. ii., p. 149, note.

XVII. Study of horsemen. Thiers collection. False. See vol. ii., p. 147, note.

XVIII. Man defending himself with the help of a burning mirror against five animals, among which are a dragon and a unicorn. Pen. (Cat. Tauzia, no. 1640. Replica or copy in the British Museum, reproduced in vol. ii., p. 57.) An Italian, perhaps a Milanese, engraving of the early years of the sixteenth century, placed by Bartsch (vol. viii. p. 515, no. 44); and Robert Dumesnil (vol. v. p. 30) in the work of Jean Duvet (*Master of the Unicorn*), represents the same subject, but with notable alterations. In his engraving (known as *Poison et contre Poison—Bane and Antidote*) the man with the mirror is naked, and the group of animals is

differently arranged. The engraving is much larger than the drawing; it measures 0 m. 303 cm. high by 0 m. 213 cm. wide. (Tauzia, *Notice supplémentaire des Dessins des diverses Écoles*, 1879, no. 1640.)

XIX. Three-quarters head of a child turned to the right. Silver point. Classed by Reiset among the "unknown" Italian drawings (no. 448); claimed by Morelli for Lorenzo di Credi. (Braun, no. 184.)

XX. Nearly full-face head of a beardless young man, with curly hair, the head slightly thrown up and turned to the right. Much too hard for Leonardo. Ascribed to Lorenzo di Credi. (Braun, no. 193.)

XXI. Head of a young man in profile, with a skull-cap. Formerly in the Jabach collection. Morelli declines to believe in the authenticity of this superb drawing! (Cat. Reiset, no. 382; Braun, no. 172.) Rep., vol. i., pl. i.

XXII. Profile head of a young man turned to the right, an oak wreath in his hair. Seems to have been drawn from the same model as no. XXI. Resembles an antique cameo. Formerly in the Jabach collection. Morelli ascribes this drawing to Boltraffio, and says it must have been used for the *S. Sebastian* by that master in the Frizzoni collection. (Reiset, no. 384; Braun, no. 176.) Reproduced vol. ii., p. 197.

XXIII. Bust of a beardless young man, with an enormous head of hair. Red chalk. (Reiset, no. 386; Braun, no. 174.)

XXIV. Three-quarters face portrait of a man wearing a large hat, the eyes looking up. Included in Leonardo's school by the *Catalogue sommaire des Dessins* (no. 2304), but rather, in my opinion, German. (Tauzia, *Notice de la Col. His de la Salle*, no. 122.)

XXV. Head of an oldish-looking man, without a beard and bald; gloomy expression. Almost full face, but only one ear showing. Pinkish paper, heightened with white. Fine drawing, but the ascription to Leonardo not beyond dispute. No number.

XXVI. Full-face head of a man with a triple chin. Silver point. A horse-like type. This fine portrait is merely ascribed to Leonardo; but it seems to me worthy of him in every way, especially by the fine modelling of the brows. (Reiset, 392; Braun, no. 179.)

XXVII. Beardless head of an old man, with a sinewy throat. Three-quarters face turned to the left. (Reiset, no. 385.) See vol. i., p. 237.

XXVIII. Head of a beardless old man, three-quarters to the right, his curly hair raised over his forehead so as to enframe the face. Lower down, a small profile, slightly indicated. Vallardi collection. Wrongly claimed by Morelli for Bernardino dei Conti. (Tauzia, no. 2027; Braun, no. 169.)

XXIX. Head of an old man, no beard. Too dry for Leonardo; more likely by Lorenzo di Credi. (Braun, no. 171.)

XXX. Head of a bald and beardless old man, three-quarters face to the left. Vallardi collection. Compared by Tazzia (no. 2028) to Fra Bartolommeo's drawings.

XXXI. Head of a man, no beard, the features contracted; three-quarters face. May have to do with the *Battle of Anghiari*. Red chalk. (Braun, no. 195.)

XXXII. Full-face study of a beardless old man. Seems to me rather by Lorenzo di Credi. (Braun, no. 194.)

XXXIII. Head of a bearded old man, by Pisanello. (Braun, no. 192.)

XXXIV. Head of a beardless man; three-quarters face to the right. Red chalk. A 17th century drawing. (Portfolio, no. 2557.)

XXXV. Two heads facing each other; a young man turned to the left, a negro to the right. False. (Portfolios, no. 2517, 64.)

XXXVI. Five grotesques. Copy from the Windsor drawing. See vol. i., p. 249. (Portfolios, nos. 2516, 4<sup>2</sup>; Braun, no. 212.)

XXXVII. Portrait of Isabella d'Este. Formerly in the Calderara, Pino, and Vallardi collections; bought in 1860 for 4,410 francs. See vol. ii., p. 246. (Reiset, no. 390; Braun, no. 162.)

XXXVIII. Head of a woman, nearly full face, looking to the left; high up on the right the profile of a young man, Execution rather stiff, and the expression haggard. Doubtful. See vol. i., p. 213. (Reiset, no. 387.)

XXXIX. Front face of a woman, with haggard eyes; the head is covered with a piece of drapery, which hangs down in a knot on either side of the face. A superb drawing, modelled with a power which recalls certain drawings by Albert Dürer (study for the *Saint Anne*). Reproduced, vol. ii., pl. 20. (Reiset, no. 388.)

XL. Female head, front face. Not genuine. (Braun, no. 163.)

XLI. Head of a young woman, in profile to the left. Lombard school. (Braun, no. 164.)

XLII. Bust of a woman, with long hair, almost full face. An interesting drawing by one of Leonardo's pupils. (Reiset, no. 396.)

XLIII. Study of drapery for a kneeling figure, turned to the right. Salle des Boîtes. (Tazzia, no. 1641; Braun, no. 182.) This should be compared with a similar drawing, with slight variations, in the Uffizi. (Braun, no. 447.)

XLIV. Study of drapery, for a *Christ Enthroned*. The modelling admirably firm and flexible. Painted in black and white on a very fine canvas. Reiset's Catalogue, no. 389. Reproduced, vol. i., pl. ii. There is an almost exact copy in the Malcolm collection at the British Museum, ascribed to Lorenzo di Credi.

### Vallardi Collection.

This collection, the main feature of which is a series of drawings by Pisanello, ascribed until quite lately to Leonardo, was bought in 1856 for the sum of 35,000 francs (£1,400) (*Gazette des Beaux Arts*, vol. i. p. 376). The drawings it contains were described by Vallardi in a pamphlet entitled, *Disegni di Leonardo da Vinci posseduti da Giuseppe Vallardi*, Milan, 1855. It was probably made at the same time as the collection in the Ambrosiana, and the Chatsworth collection, in which drawings by Pisanello also figure under Leonardo's name.

XLVI. Study of a youth in profile turned to the right; curling hair. The drawing very faint. Doubtful. On the verso, a long note in eighteenth-century writing (that of Padre Resta) declaring it to be a portrait of Melzi. Fol. i, no. 2259.

XLVII. A foot seen from in front, resting on a table. A washed drawing, of a bluish tone. An excellent study, though of doubtful authenticity. Fol. 7, no. 2261.

XLVIII. Two men facing each other, one crowned with laurel. False. Fol. 2, no. 2265.

XLIX. An architectural drawing. Pen. Probably by Leonardo. Fol. 39, no. 2282.

L. Drawing of machines. Pen. Parchment. Doubtful. Fols. 40, 41, 42.

LI. Six grimacing heads, facing each other; lower down, on the left, a man in a cap. A good drawing. Fol. 55, no. 2296. (Braun, no. 210.)

LII. Five grimacing heads, two of them below, turned to the left; the two above facing each other. Pen. Belonging to the same series as the preceding. Fol. 55, no. 2297 (Braun, no. 209.)

LIII. Head of a beardless old man, nearly full face; curling hair, wrinkled mouth. A copy? Fol. 60, no. 2304.

LIV. A young man, almost in profile turned to the left. Black chalk. Doubtful. Fol. 73, no. 2330.

LV. A man working a pulley. An elaborate drawing on blue paper. Not by Leonardo. Fol. 91, no. 2341.

LVI. A *Holy Family*. Not by Leonardo. Fol. 131.

LVII. *The Virgin of the Rocks*. Small. Used for pouncing. A much injured drawing, probably made for an engraving. Not by Leonardo. Fol. 134.

LVIII. Head of an aged man, almost full-face, beardless; the neck very realistically treated. Vallardi states that the model is like the Judas of the *Last Supper*. Red chalk. Fol. 135, no. 2624.

LIX. Head of a woman, full face; her eyes cast upwards, a wreath of vine leaves on her head. Red chalk. Nothing to do with Leonardo. Fol. 140, no. 10,952. (Braun, no. 163.)



LX. Bust of a woman in profile turned to the left; a handkerchief on her head. Black chalk. Fol. 164. On the reverse, a head in profile. False.

LXI. Study for the head of the *Madonna Litta*. Vallardi notes its relation to the picture. Fol. 170, no. 2376. Reproduced, vol. i. pl. xi.

Same folio, no. 2250. Studies of armour, with notes in Leonardo's writing. Bluish paper. Pen.

LXII. A mole, with a rotunda on the summit; a plan at the side. Published by M. de Geymüller in Dr. Richter's work (pl. xcvi.). Fol. 182, no. 35,707.

LXIII. Grimacing heads. Pen. Copies. Fol. 186, nos. 35,711, 35,712, 35,714.

LXIV. A statue, seen from behind. Nothing to do with Leonardo. Fol. 208.

LXV. A young man draped in the antique manner. Bust, full face, the eyes cast up. Nothing to do with Leonardo. *Ibid.*

LXVI. Bust of a young woman, with wavy hair, the eyes cast up. False. Fol. 218 (255). (Braun, no. 201.)

LXVII. An aged man, in a fantastic helmet; in profile, turned to the left. Pen. Doubtful. Fol. 235, no. 2491.

LXVIII. A grotesque person, in profile, turned to the left, an owl on his tongue. False. Fol. 238, v°.

LXIX. Two flayed arms. Doubtful. Fol. 246.

LXX. A naked man, without arms, standing. An anatomical study. Pen. Pollajuolo (?). Fol. 249.

LXXI. Grotesque heads. Red chalk. False. Fol. 267.

#### *Library of the Institut de France.*

A large number of sketches are scattered throughout the manuscripts of the Library, published by M. Ravaissin-Mollien. I will only say in regard to these that in one of his plates (pl. xli.) Gerli has grouped together several sketches which have no connection with each other in the manuscripts. The dog's head belongs to MS. I (fol. 48), the two kneeling men to MS. L (fols. 2, 4), etc.

#### *École des Beaux Arts.*

Study for the angel in the *Virgin of the Rocks*. Reproduced vol. i., p. 165.

Head of a young woman; three-quarters, bending forward. Italian chalk, heightened with bistre. A study full of distinction, but probably by some imitator, such as Sodoma, rather than by Leonardo himself.

#### *M. Léon Bonnat's Collection.*

This collection, the most important made by an amateur in our own day, contains a series of drawings of the first importance. A few

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others, though not by Leonardo, originated in his studio, or are copied from works by him. M. Charles Ravaissin-Mollien is preparing for the publication of this valuable series.

I. The *Madonna del Gallo*. Pen. Reproduced vol. ii., p. 188. The child sketched at the side recalls Verrocchio's *Child with the Dolphin*. A large cartoon in Italian chalk.

II. The Virgin seated, facing the spectator and smiling; she holds in her arms the Infant Christ, who raises his hand in benediction; to the left, the little S. John. Study for the *Virgin of San' Onofrio*. Reproduced, vol. i. p. 73.

III. The Infant Jesus. A life-size drawing on bluish paper, in the style of the study of a foot in the Louvre. An irregular fragment, the head missing. Height 0 m. 42 cm., maximum width 0 m. 25½ cm. Silver point, heightened with white. Reproduced, vol. ii., pl. 25. Study for the *Madonna of San' Onofrio*.

IIIA. A head of the Virgin, nearly full face, the eyes cast down. Blue silver point on greenish paper. Reproduced, vol. ii. p. 201.

IV. Study for the *Adoration of the Shepherds*. The Child lies on the ground; the kneeling Virgin adores him. Three figures to the right, four to the left; below, a young man with clasped hands. Height 0 m., 22 cm., width, 0 m., 15½ cm. Drawn in with pencil, and worked over with the pen. Breadalbane sale, 1886, London. Reproduced, vol. i. pp. 52, 161.

V. Christ standing; two apostles with haloes kneeling before him. Pen. Doubtful.

VI. Two apostles with haloes, kneeling. Pen. Doubtful.

VII. S. Sebastian. Standing, naked, save for a slight drapery about the loins; the arms tied behind the back. A fine drawing, closely akin to the drawing published by Gerli (pl. viii.). Both are studies for a *Saint Sebastian*; but, as I have elsewhere pointed out, they are also the prototypes of Michelangelo's *Captive Slaves*. Italian chalk.

VIII. An allegorical composition for a medal. Three men standing in confused attitudes; an inscription by Leonardo, with an allusion to Envy. Drawing on white paper, begun in hematite, and completed in ink. Described by M. Ravaissin-Mollien in the *Bulletin de la Société nationale des Antiquaires de France*, 1894, p. 191-193.

IX. Sketch in chalk, worked over with ink. Marked T. L. (Thomas Lawrence). Reproduced, vol. i., p. 244.

X. Portrait of Baroncelli. Pen. Formerly in the Chennevières Collection. Reproduced, vol. i., p. 53.

XI. Portrait of a young beardless man, in profile, turned to the left; the features somewhat insipid; a long aquiline nose, well-cut

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mouth, long hair falling over the cheeks and hiding the ears; the head covered by a skull-cap (Pico della Mirandola?). Height 0 m. 345 cm., width 0 m. 255 cm. A fine Milanese portrait. Pen and wash.

XII. Head of a beardless man, three-quarters face, turned to the left and slightly raised. Red chalk. On the reverse a word in Leonardo's writing.

XIII. Head of a bald, beardless man, with an aggressive expression. Red chalk. Reproduced, vol. ii., p. 152.

XIV. Head of a bald, beardless old man; the cranium very strongly developed. It recalls the old man in the Ambrosiana attributed to Melzi, and also the drawing published by Dr. Richter (pl. xl.). Red chalk. Reproduced, vol. ii., p. 105.

XV. Head of a woman, almost in profile, turned to the right; a smiling expression. Red chalk.

XVI. A horse standing, turned to the left with marks in figures and letters ("largheza di petto," etc.) Silver point on pink paper.

XVII. Studies for the legs of a horse, standing; one leg raised, with figures. These horses are akin to those in the Turin Library. Italian chalk and pen.

XVIII. Sketch of architecture; arches, with an inscription. Red chalk.

XIX. A leaf (acanthus?) like those in the Windsor Library. Pen.

#### *M. F. Ravaisson's Collection.*

Bust portrait, life-size, of a young man with long fair hair, dressed in the fashion of the late fifteenth and early sixteenth centuries, draped in a black mantle, which shows a pair of rose-coloured under sleeves, and wearing a small cap with upturned brim. The head and body, three-quarters to the front, are slightly turned to the right. A low wall in the background. In pastels of different colours.—Height 0 m. 625 cm., width 0 m. 480 cm. Ascribed to Leonardo. Exhibited in 1879 at the École des Beaux Arts.

#### *Baron Edmond de Rothschild's Collection.*

Study for a S. George killing the Dragon, with studies for the horses and a dog. A young man on a horse in full gallop, with a study of a horse seen from behind, and of a horse's head. (Reproduced in the *Gazette des Beaux Arts* 1867, vol. ii., p. 532-533.) Formerly in the Galichon Collection.

#### *P. Valton Collection.*

(Formerly the Armand Collection.)

Studies for an *Adoration of the Magi* (from the Galichon collection). Pen. See vol. i., pp. 16, 45, 65, 76, 141, and vol. ii., p. 9.

A study of archers. Above, three archers taking aim, sheltering themselves behind shields; below, a shell bursting, and three soldiers, one turning round. Formerly in the Mariette, Lawrence, and De Fries collections. Pen. Vol. i., p. 225; vol. ii., p. 133.

#### DISPERSED COLLECTIONS.

##### *Denon (1826).*

Three caricatures. A woman in profile to the right, with a turned-up nose, and an enormous upper lip; bust of a man in profile to the left, in a pointed cap; he carries a stick on his shoulder; head of an old woman in profile to the left, her mouth open. Pen or chalk. Catalogue, no. 240. Reproduced in *Les Monuments des Arts de Dessin*, vol. ii, pl. lxx.

Head and legs of a horse or horses. Study. Labourers working a capstan. *Ibid.*

##### *Emile Galichon Collection (1875).*

No. 164. Study of draperies. Drawn with the brush and heightened with white. Sold to M. Amsler for 1,000 francs (£40).

Nos. 168 and 169. Portraits of a man and woman. (Lodovico and Beatrice Sforza?) Drawn with the brush and with chalk. Sold to Herr Suermondt for 3,600 francs (£144).

On the studies for the *Adoration of the Magi*, and the *Victory* formerly in the Galichon collection, see under the Louvre, the British Museum, and the Valton collection.

##### *Bonnaffé Collection (1897).*

M. Bonnaffé's collection included a little grisaille (0 m. 22 cm. x 0 m. 168 cm.), a head of a woman with curling hair, inclined to the left (formerly in the Leclanché collection). This has been occasionally ascribed to Leonardo himself, but M. Bonnaffé tells me that he considers it a work of Leonardo's school.

#### CHANTILLY.

##### *Musée Condé.*

Study in red chalk for the Infant Jesus of the *Saint Anne*. Formerly in the Desperet collection (Braun, drawings exhibited at the École des Beaux Arts, no. 41). Akin to the drawing engraved by Gerli (pl. ix.). See vol. i., p. 12; vol. ii., p. 129.

Study of a naked woman, half-length. See vol. ii., pl. xix. and p. 155.

#### RENNES.

##### *Museum.*

The *Catalogue du Musée de la Ville de Rennes* attributes a certain number of drawings to Leonardo or to his school. I am indebted to

M. Lafond, professor at the district École des Beaux Arts of the town, for photographs and descriptions of the more important of these.

I. The Angel of the *Annunciation*. In black chalk, relieved with white; in profile, turned to the right, one knee on the ground, a lily in the left hand; ample draperies. It looks to me more like the work of Fra Bartolommeo.

II. A youthful head (of an Angel?). Full face. In black chalk, the outlines pricked for pouncing. This beautiful drawing belongs to the school of Raphael, not that of Leonardo.

III. Study of draperies. On canvas, washed with Indian ink, and heightened with white. A standing figure, facing the spectator, but turned slightly to the left. In the manner of Leonardo, but rather dry.

IV. A study of draperies. The same process. A standing figure, turned slightly to the right; the upper part of the body and the feet naked;

the right hand holds up the draperies. (See remark above.)

V. Portrait of a beardless man in profile to the left, a cap on his head. In black chalk. Florentine school of the fifteenth century. Akin to the drawing exhibited at the British Museum in 1898 (no. 28).

VI. A small grotesque head, with puffy shaven cheeks, a short nose, and large mouth. The hair and ear are confined in a net, over which is a hat with a turned-up brim. Pen. Very delicate in treatment. M. Lafond is inclined to consider this a German drawing.

#### VALENCIENNES.

##### *Museum.*

A spit turned by steam. Referred to by M. Séailles (p. 347-348). In spite of my researches, I have been unable to find any trace of this drawing.

## GERMANY AND AUSTRIA

#### BERLIN.

##### *Herr Beckerath's Collection.*

Fragment of a battle-scene. A group of naked horsemen, fighting. In silver point, on prepared paper. Height, 0 m. 155 cm., width, 0 m. 80 cm. Ascribed to Leonardo. Exhibited in 1879 at the École des Beaux Arts.

#### BRUNSWICK.

##### *Museum.*

According to a communication for which I am indebted to Professor Riegel, there are in this collection five drawings formerly ascribed to Leonardo, not one of which can be accepted as genuine.

#### COLOGNE.

##### *Wallraff-Richartz Collection.*

Study for an *Adoration of the Magi*. A large drawing, bearing the (modern) inscription, "A double drawing by Raphael." The figures, eleven in all, are naked, save for some slight indications of draperies: they are drawn with the pen, with pale ink that has turned rather yellow, on ruled paper. The outlines have not been drawn over by a modern hand, as in the corresponding drawing in the Louvre. There is something slightly soft and indefinite in the handling, but the Leonardesque character is strongly defined. (Note the somewhat mournful smile.) The influence of the antique is clearly seen in this careful study of the nude,

and in the attitudes of the figures. On the reverse of the sheet, two studies of crabs, also drawn with the pen. See vol. i., pp. 67, 77.

#### DRESDEN.

##### *Print Room.*

Sketch for a Madonna, in silver point. (Braun, 49.) According to Signor Morelli, this drawing is by Lorenzo di Credi, and not by Leonardo.

Head of a man with a long beard, in profile to the right. Red chalk. Doubtful. More facile in execution than Leonardo's drawings, and probably later. (Braun, no. 47.) Signor Morelli refuses to see Leonardo's hand in this drawing.

A naked man, one knee on the ground, his back to the spectator, his right arm raised as if to defend himself. Is this a study for the *Battle of Anghiari*? A doubtful work. Signor Morelli rejects it. (Braun, no. 48.)

Two naked men running away. Same series. (Braun, no. 46.)

#### FRANKFORT-ON-THE-MAIN.

##### *Staedel Institute.*

I. Fight between a dragon and a lion. The lion turns round, opening its jaws, the dragon rests one of its paws on the lion's back. Akin to the drawing in the Uffizi (Müller-Walde, pl. xxii.). Passavant identifies this red chalk drawing with that described by Lomazzo (*Traffato*, p. 336). It was engraved in reverse

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by Zoan Andrea (*Le Peintre Graveur*, vol. v., p. 81).

II. Portrait of an aged man, beardless, three-quarters to the front, a bull-dog's face, a most truculent expression. On the reverse is a fragment of a profile (the nose, the mouth, the chin, and the beginning of the throat, a study for the head of a Madonna or Angel). Silver point, on white paper, no. 6954. Mitchell sale, where it was attributed to Ambrose Holbein. I am of the opinion of Herr Bayersdorfer, who was the first to recognise Leonardo's hand in this drawing. The profile especially is quite in the master's manner.

III. Head of a man (no. 4468), full face, beardless and bald, with puffy features. Black chalk on bluish paper. This drawing looks to me like a forgery.

IV. Head of a child (no. 4467). Red chalk. False.

V. Profile of a man with a satyr's face (no. 4464). Pen drawing. Old, but not by Leonardo.

VI. Bust of an old man, turned to the right, wrapped in a cloak. Red chalk. Height, 0 m. 100 cm., width, 0 m. 068 cm. Formerly in the Hudson, Lawrence, and Mitchell collections. Exhibited in 1879 at the École des Beaux Arts.

VII. Head of a woman, in profile to the right, on the reverse a woman, in profile to the left, opening her mouth to abuse some one (no. 4466). Pen. False.

VIII. Head of a satyr, full face. Pen. (no. 4465.) False.

#### HAMBURG.

##### *Museum.*

I am indebted to Herr W. Seidlitz, Director of Fine Arts in the Kingdom of Saxony, for descriptions of the following drawings. I beg here to tender my public thanks to my distinguished correspondent.

I. *Aristotle and Campaspe*. The scene is a room; Campaspe mounts on Aristotle's back. Pen drawing, on grayish-blue paper. On the reverse, ten lines in Leonardo's writing.

II. Two naked youths, standing, and conversing with an old man, seated; at their feet a naked child; lower down, two other children. Water-colour, on violet-tinted paper.

III. Head of a young man, in profile to the right. Pen. On the reverse several autograph notes.

IV. Head of a beardless old man. Caricature. In profile to the left, looking up. Red chalk. On the reverse, six lines in Leonardo's writing.

V. Three figures for a treatise on optics. Below, an inscription of one line. Pen. On the reverse, a S. Sebastian, also drawn with the pen.

#### MUNICH.

##### *Print Room.*

Two copies in red chalk of the portrait of Isabella d'Este, made probably from the drawing at Florence, rather than from that in the Louvre. Old copies, but a good deal modified and embellished.

A small pen-drawing, washed with bistre, of two heads of old men, beardless, in profile turned to the left; one is covered with a sort of cowl. Perhaps an original, but in any case a copy of an original by Leonardo. Rather faint.

#### PESTH.

##### *Museum.*

Two heads of warriors, for the *Battle of Anghiari*. Black chalk. (Richter, vol. i., p. 338.) See vol. ii., p. 148-149.

A warrior fighting. Study for the same. Red chalk. (Richter, vol. i., p. 339.) See vol. ii., p. 148-149.

#### VIENNA.

##### *Albertina.*

The drawings in the collection of the Archduke Albert, or Albertina collection, have been reproduced in photographs by Messrs. Braun, Clément and Co. Waagen has described them in his work, *Die vornehmsten Kunstdenkmäler in Wien* (Vienna, 1866-67, vol. ii., p. 135-136); but his descriptions call for a rigorous revision, which I have undertaken with the help of Herr Wickhoff's study, published in the (Viennese) *Jahrbuch (Die Handzeichnungen der Albertina)*, fasc. ii., p. xi.)

I. *The Visitation*. Nothing to do with Leonardo. Ascribed by Waagen to Sebastiano del Piombo. (Braun, no. 89.)

II. Head of Christ, with the crown of thorns. Nothing to do with Leonardo. (Braun, no. 90.)

III. Head of S. Anne. (Braun, no. 92.) Herr Wickhoff rightly pronounces this drawing an old copy from the picture in the Louvre.

IV. S. Mary Magdalene standing with clasped hands, surrounded by six angels hovering in the air. A drawing much more akin to the school of Raphael than to that of Leonardo. Ascribed by Waagen to Sodoma. (Braun, no. 93.)

V. Head of a beardless old man, in profile, turned to the left, with a cowl over his habit, known as a drawing of Savonarola, but really representing a man of a totally different age and type. Formerly in the Vasari and Crozat collections. Pen and wash. Caylus, *Recueil de Testes de Caractères et de Charges*, pl. lxiii. (Braun, no. 97.)

VI. A naked man, standing, facing the spectator, his arms extended; above, the hands

drawn separately. Nothing to do with Leonardo. (Braun, no. 95.)

VII. A woman seated; a study of draperies. An inscription in an unknown handwriting. An interesting drawing, but not by Leonardo. (Braun, 101.)

VIII. Caricatures and heads, in profile. (Braun, no. 98.) False.

IX. A frame of eight drawings, somewhat loosely handled, grouped together in a border designed by Vasari. Pen. Head of a young woman, almost full face. A little S. John the Baptist standing, his hands crossed on his breast. Six grotesque heads. Pen. (Braun, nos. 102—109.) Signor Morelli accepts the six heads as authentic. They are, however, manifestly false, although Vasari did them the honour of cataloguing them under the name of Leonardo.

X. Two heads turned to the left, one of which has woolly hair, and the negro type. Pen. Small size. Doubtful. (Braun, no. 99.)

XI. Two horses standing, facing each other. Pen. More than doubtful. (Braun, no. 100.)

#### WEIMAR.

##### *Private Collection of the Grand Duke.*

Bust of *David*. Silver point. Reproduced, vol. i., p. 33.

Heads of Apostles. Copies from the *Last Supper*. See vol. i., p. 191, note.

*Leda with the Swan*. Pen drawing. Too full and round in contour to be by the hand of the master. (Braun, no. 148.) Attributed to Sodoma by Signor Morelli. (*Die Galerien Borghese und Doria Pamfili*, p. 196.)

Head of an aged man, with a Cæsarian profile; bald and beardless, in profile, turned to the right. Doubtful. (Braun, no. 150.)

Head of an old man, bald and beardless, in profile, turned to the right. Red chalk. Probably genuine. (Braun, no. 152.)

Five grotesque personages. Copy of the Windsor drawing. (Braun, no. 151.)

#### *Museum.*

According to a communication received from Professor Ruland, the Grand Ducal Museum possesses a page from one of Leonardo's notebooks: a sheet in 8vo, with several lines of writing, and various slight anatomical sketches on either side.

Drawing of a horseman. (Braun, no. 24.) This drawing is ascribed to Fra Bartolommeo; it is more probably a production of the school of Leonardo.

## HOLLAND

#### HARLEM.

##### *Teyler Museum.*

Head of a man, in profile to the right, with a very prominent chin. Pen drawing, washed with bistre, on dark yellow paper. This, according to Mr. Scholten, the Keeper of the Museum, is the only drawing that can be ascribed to Leonardo. Others—sketches after drawings or pictures by the master, studies of

heads with pen or pencil—have no real connection with him.

King William II.'s collection contained a fairly large number of drawings by Leonardo, descriptions of which will be found in the *Catalogue des Tableaux de la Galerie de feu S. M. Guillaume* (p. 142 et seq. 1850). The greater number of these drawings are described here under headings: the Louvre, former Galichon Collection, Weimar Museum, etc.

## ENGLAND

#### LONDON.

##### *British Museum (Print Room).*

The majority of these drawings have been photographed by Braun.

I. *The Virgin holding the Infant Jesus on her Lap*. A large and brilliant drawing, full of detail and movement. In silver-point and black chalk, on greenish paper (Braun, no. 45). Reproduced, vol. i., pl. 5. The Virgin has a straight thin nose and smiling mouth, with something imperious yet free in the expression,

like the *Madonna of Sant' Onofrio*. Relying on the analogy of motive here with the Virgin and Child of the great altar-piece in the Brera, representing Lodovico il Moro and his family at the feet of the Virgin (vol. ii., p. 41), Signor Morelli ascribes this drawing to Bernardino dei Conti, or to the anonymous author of this altar-piece. It also served as a study for a *Virgin* in the Berlin Museum (Bode, *Gazette des Beaux Arts*, 1889, vol. i., p. 497—499). The factor that tells most against Leonardo's authorship is the treatment of the hands, which

are shrivelled and knotty. They have perhaps been re-touched or worked over. On the other hand, we cannot but be struck by the similarity of handling in this drawing and the studies of the Virgin at Christ Church and Chatsworth (see vol. i., p. 169 and pl. vi). This was not a solitary instance in which a contemporary of Leonardo's translated one of the master's drawings into paint. Compare the Virgin's head of the Windsor drawing, reproduced vol. i., pl. iv., p. 56, with the head of Botticelli's Virgin of the *Magnificat*.

The Brera picture, moreover, differs in some essentials from the drawing in the British Museum. In the picture the Virgin faces the spectator, whereas in the drawing she is turned to the left; in the picture she is huddled together, while in the drawing her attitude is full of ease and grace. The costume also differs. It is all freedom and elegance in the drawing, whereas in the picture it is clumsy and heavy. We may note another variation. The left arm sustains the Infant Jesus here; there it is extended to the donor's wife. As to the Child, his left arm is laid along his body in the drawing; in the picture it rests on the Virgin's right hand.

II. Study for the *Saint Anne*. The Virgin, in profile on the right, is seated on her mother's lap, and holds the Infant Jesus, who is blessing the little S. John. In technique, this is closely akin to the drawing at Venice. Lower down, there are studies for the same group or the same figures. Pen drawing, washed with Indian ink. Below, several sketches in pen or chalk; wheels; four autograph lines. On the reverse, a powerful head of an old man, beardless, in profile to the right. Italian chalk. (Former Galichon Collection, no. 163.)

III. The Virgin seated, and holding the Child. A pen-drawing, on pink paper. On one side, profiles and geometrical designs in chalk; on the reverse, the Virgin seated and holding the Child; another, half-length, naked, also drawn with pen and ink. The drawing on the right side of the sheet is perhaps by Leonardo; those on the reverse are extremely doubtful.

IV. Studies for the Infant Jesus playing with a cat. Three children, two seated, one kneeling; a cat alone. Pen. In Leonardo's first manner. On the reverse, three other children and a cat.

V. Another study for the *Madonna del Gatto*. The Virgin, seated, holding the Child, who embraces a cat; another study at the side, for the Virgin's head. On the reverse, another and freer study of the same motive. Pen and Indian ink.

VI. Another study for the *Madonna del Gatto*. Pen. Five groups, and the head of a youth, in profile to the right. The Child is squeezing the

cat in every possible manner. The cat in some cases is more like a lamb. (Exhibited, no. 39.)

VII. Study of two draped figures, for a Virgin and a S. John the Baptist kneeling. In tempera on very fine canvas, in chiaroscuro. Formerly in the Westcombe, Robinson, and Malcolm collections. Doubtful. (Exhibited in 1879 at the École des Beaux Arts.)

VIII. Study for the *Adoration of the Magi*. Five persons standing; another sitting; on the left, the profile of an old man turned to the right. Pen (Müller-Walde, fig. 77). On the reverse, an allegorical composition. Pen and ink, on pink paper. A naked woman incites a child to blow through a tube upon a group of three or four persons seated or rather huddled together in the middle of the drawing; among them women with pendulous breasts. In the left-hand corner, a sketch, in silver-point, of a confused group of figures. The inscription, "Ingratitudine, Invidia, Ignoranza (?), Fortuna," is by Leonardo's hand, though all the words are not written backwards.

IX. Studies for the *Adoration of the Magi*. Above, a draped figure, with a long speaking-trumpet, is shouting into the ear of a seated person; below, two draped figures, seated, seem to be talking together. Pen and bistre. Formerly in the Lawrence and Malcolm collections. Reproduced, vol. i., pp. 72, 225.

X. Study for the Christ of the *Resurrection* in the Berlin Gallery; the left arm raised, the head only slightly indicated; the drapery floating behind the back is, on the other hand, elaborately treated and very fine. Silver-point, heightened with white, on blue paper. Catalogued as of the school of Leonardo. Formerly in the Malcolm collection.

XI. Study for a *Victory*. The goddess is naked to the breast, her hair in disorder, one foot raised as if in rapid motion, one hand laid on a sort of tray, which serves as base to a genius about to take flight. Above, a dishevelled head, three-quarters face. A beautiful drawing in pen and ink and silver-point, washed with bistre. On the reverse, a few lines in old handwriting. Formerly in the Desperet, Galichon, and Malcolm collections (Braun, no. 38. Drawings of the Old Masters.)

XII. Five horsemen. Study for the *Battle of Anghiari*. Pen. It contains the motive of the two horses biting each other's breasts, and a horse in full gallop, recalling the drawing in the late Galichon collection.

XIII. A man defending himself against animals by the help of a burning-glass. Allegorical composition. Original of the drawing in the Louvre. Pen. Drawn with very small fine strokes. Reproduced, vol. ii., p. 57.

XIV. A naked man, standing. Study for a

Neptune (?) Pen. (Braun, no. 48.) Reproduced, vol. i., p. 1.

XV. Engines of war. A man on horseback drawing a chariot, armed with scythes; below, two other engines of war, and a lance with several heads. Autograph inscription. Pen. (Braun, no. 52.) Reproduced, vol. ii., p. 105.

XVI. Bust of a warrior, in profile, in a richly ornamented helmet and cuirass. Silver-point, on prepared paper. Formerly in the Lawrence, Robinson, and Malcolm collections. Reproduced, vol. i., p. 57.

XVII. Head of a bald, beardless old man, with a triple chin; full face. The original of a drawing in the Ambrosiana. Silver-point, heightened with white, on blue paper. This drawing seems to have been touched up by another hand, which explains its attribution in the British Museum Catalogue to the school of Leonardo, and not to Leonardo himself. Reproduced, vol. i., pl. 12, p. 240.

XVIII. Head of a beardless man, in profile to the right. Silver-point, heightened with white, on bluish paper. The drawing very faint. It seems to represent the same person as no. XVII., and has much in common with a drawing in the Trivulzio manuscript. (Beltrami, p. 68.) Reproduced, vol. i., pl. 10, p. 214, (Braun, no. 46.)

XIX. Head of a beardless man, in profile to the right, his lips parted, his eyes cast up, his hair dishevelled. Red chalk. A fine drawing. (Braun, no. 44.) The same, reversed, in the Ambrosiana.

XX. Bust of a beardless man, still young, in profile to the left, his lips parted, his head protected by a helmet in the form of a lion's mask. He bears some likeness to the young horseman in the *Battle of Anghiari*. Silver-point. Doubtful. (Braun, no. 293.)

XXI. Small beardless head, with turned-up nose and protruding lips, in a cap ending in a veil. In profile to the right. A caricature-like study. Pen. (Braun, no. 50.)

XXII. Small head of a bald, beardless man, in profile to the left; the protuberances of the skull very strongly marked, and the chin prominent, but not treated as a caricature. Pen. (Braun, no. 51.)

XXIII. Head of a bearded man, three-quarters face turned to the right, looking down. Red chalk. In the manner not of Leonardo, but of Raphael. (Braun, no. 47.)

XXIV. Seven grotesque heads, all in profile, four turned to the right, three to the left. Below, on the right, a shrewish looking woman, screaming. Pen.

XXV. A man with a long beard, facing the spectator; he wears a cap with a feather. Later than Leonardo, possibly not even

Italian. (Braun, no. 297.) The same may be said of Braun's nos. 292, 294, 295.

XXVI. Study of a leg. The lower part of a naked man's body, in profile. Red chalk. Autograph inscription.

XXVII. Three heads of peasants, laughing. Of a pronounced Flemish character, in the manner of Quentin Matsys. Pen. (Braun, no. 49.) False.

XXVIII. Large study of a horse's skull, seen from the front. Wash. Doubtful. A whole series of drawings in the Malcolm collection ascribed to Leonardo are in reality by imitators. Among others, there is a large copy of one of the horsemen in the *Battle of Anghiari*. I shall not discuss these drawings, which are described in Sir Charles Robinson's Catalogue of 1876.

#### *South Kensington Museum.*

I. Design for a monumental chalice, or for the top of a font, ornamented with "putti." Pen and chalk. A charming sixteenth-century drawing, which has no connection whatever with Leonardo, or with his school. No. 2314.

II. Two ornaments, leaves, etc. Pen. No thing to do with Leonardo. Nos. 6702, 6703.

III. Head of an old man, three-quarters face turned to the right. Pen. Another head, in profile to the right. Two heads in profile, a young and an old woman. Above, the skull of a carnivorous animal (?) Pen and chalk. Doubtful. Dyce collection, no. 152.

IV. Head of a horse, in profile to the left. Pen. A very spirited drawing, not by Leonardo. (Same collection, no. 180.)

V. Two heads, in profile to the right. An old man with a long beard, and a young man in a cap. Pen. Later than Leonardo. No. 188.

VI. A grotesque head. An old man, three-quarters face turned to the left, with staring eyes. Pen. False. No. 179.

#### OXFORD.

##### *Christ Church Collection.*

Seven of the drawings in this collection were published in 1879 in the *Grosvenor Gallery Publications: Drawing by the Old Masters in the Library of Christ Church, Oxford*; and three others by Dr. Richter.

I. Virgin seated, half-length, her breast uncovered; she holds in her arms the Infant Jesus, naked; he lays one hand on his Mother's right breast. Black chalk. Waagen considers this drawing one of Leonardo's masterpieces. Signor Morelli ascribes it to Giampetrino (*Die Galerien Borghese und Doria Pamfili*, p. 204). Very doubtful. (Grosvenor, no. 1.)

II. Study for the *Virgin of the Rocks*. Bust of a woman, her eyes cast down, her head inclined to the right, her curling hair falling to the upper edge of her bodice, which is cut out at the throat. A somewhat prim expression. Silver-point, heightened with white, on bluish paper. According to Signor Morelli, this drawing is by Bernardino dei Conti. But as a fact, it is, as was shown vol. i., pp. 164, 169, an original study by Leonardo for the *Virgin of the Rocks*.

III. Allegorical composition. Two women seated, a third driving a flock of sheep. Pen. Reproduced, vol. ii., p. 56.

IV. An allegorical composition. A woman mounted on a toad, drawing a bow; behind her a man, on the right a skeleton armed with a scythe. Pen. (Richter, pl. lx.)

V. Allegorical composition. A woman mounted on a skeleton. On one side, a body with two torsoes. Pen. (Richter, pl. lxi.) Reproduced, vol. i., p. 136.

VI. Allegorical composition. A body with two heads and four arms. Pen. Richter, pl. lix. Reproduced, vol. ii. p. 53.

VII. Portrait of a man, in profile to the right, his head thrown back. He has thick lips like a Moor, in spite of his aquiline nose; a triple chin, and curling hair. In black chalk, with the (forged) signature LIONARDO DA VINCI. Ascribed by Waagen to one of the best of Leonardo's pupils. This portrait is certainly not that of Lodovico il Moro, to whom it does not bear the least resemblance. (Grosvenor Gallery, no. 2.)

VIII. Portrait of a beardless man, middle-aged; a bust, three-quarters to the right. The eyes cast slightly upwards. Fifteenth-century costume; a flowered doublet and a cap. Black chalk. A good portrait, but not sufficiently free for Leonardo. (Grosvenor Gallery, no. 3.)

IX. Portrait of a young man, a bust, three-quarters face. He wears a cap over his long hair, and a doublet fastened up to the throat. There is a certain likeness in this drawing to the portrait of Raphael. Certainly not by Leonardo. (Grosvenor Gallery, no. 4.)

X. A study of drapery. Silver-point, heightened with white, on blue paper. (Grosvenor Gallery, no. 6.) Doubtful.

#### WINDSOR LIBRARY.

This collection alone contains five or six times as many drawings by Leonardo as all other museums or private collections put together. In this incomparable array, scarcely more than a dozen drawings by pupils or imitators can be pointed out. Thanks to the gracious permission of her Majesty, Queen Victoria, and the great courtesy of Mr. Richard

Holmes, the Librarian of Windsor, I have been able to study this priceless collection at my leisure. If the catalogue I now offer to the public is not altogether definitive, it will at least serve as a useful base for the labours of my successors.

The Windsor collection was formed by Pompeo Leoni, who placed the following inscription on the volume containing it:—

“Disegni di Leonardo da Vinci  
Restavrati da Pompeo Leoni.”

It seems to have been acquired in Spain, after having been for some time in the possession of Juan de Espina. (Plon, *Leone Leoni*, p. 244–246.)

It first found a home in England at Kensington Palace, and afterwards at Buckingham Palace, where Passavant saw it in 1831 (*Kunstreise durch England und Belgien*; Frankfort-on-the-Main, 1833, p. 234–235). For many years past it has been at Windsor Castle. (See Waagen, *Treasures of Art in Great Britain*, vol. ii., p. 437–442; London, 1854)—(Rigollot, *Catalogue de l'Œuvre de Léonard de Vinci*, p. xxxiii.)—(Piot, *Le Cabinet de l'Amateur*, 1861–1862, p. 65.)

Seventeen of the drawings were reproduced by Bartolozzi for Chamberlain's collection at the end of last century. In 1877–1878, a large number of them were exhibited at the Grosvenor Gallery, and reproduced in a hundred photographic plates. Dr. Richter has reproduced many others in his monumental book, *The Literary Works of Leonardo da Vinci*. Others, again, have been photographed by Braun (in this connection see a note by Signor Frizzoni in the *Zeitschrift für bildende Kunst*, 1890, p. 245–248).

The Windsor collection, formerly bound up in a volume of 236 folios, mounted on blue paper, is now divided into some half-dozen portfolios. Some of the drawings are mounted on very strong cardboard; some are simply laid in wrappers. Many of these latter, of very small dimensions (some are hardly half the size of a postage stamp), appear to have been cut out of manuscripts. I have catalogued them to the best of my ability, although in the present work I have not attempted to give lists of the illustrations accompanying Leonardo's writings, and forming a commentary on them.

The numbering of these hundreds of masterpieces is very capricious. Many bear no marks at all; others, again, have several, some in ink, some in pencil. It may be imagined how greatly this irregularity added to the difficulties of my task. I venture to ask for the indulgence of my readers should any repetitions or confusions have crept into the notes I have had to depend on, far from the collection to which they refer. As far as possible, I have adopted the



oldest of the numbers, which probably refer to the pagination of Pompeo Leoni's volume. These numbers figure in the body of my descriptions, before the mention of the process employed in each case. The others follow at the end. The anatomical drawings, the drawings of horses, and two or three other series, were numbered in pencil by Piumati, whose titles I have adopted. As to the letters R. A. followed by a number, they refer to the exhibition of works by the Old Masters, organised in London in 1879 by the Royal Academy.

The papers used by Leonardo for the drawings at Windsor are of the most varied descriptions; they are tinted with dark red or cinnabar red, pink, green, blue, grey. Only a certain green tint, so characteristic of some drawings in the Louvre, at Christ Church, and at Chatsworth,—notably the studies for the *Virgin of the Rocks*—is absent. Occasionally, the master has written in red chalk on the red paper, which has not added to the legibility of his handwriting.

An examination of the water-marks would be of very great interest, but this is impossible in the case of the drawings that are stuck down to the mounts.

A study of the Windsor drawings should be made the basis on which to pronounce on the authenticity of drawings attributed to the master in other collections. It has convinced me that there are many more authentic sketches by the master than is commonly supposed, or, as Hamlet says, than are dreamt of in our philosophy.

#### A.—*Sacred History.*

Michelangelo's *David*.—A partial sketch of a sea-horse.—Drawing of a standing figure, naked.—Sketch of a palace.—Pen and Italian chalk. Autograph notes on both sides of the sheet R. A., no. 93. (Grosvenor Gallery, no. 53. Richter, pl. lxxxiii.) A fragment reproduced, vol. ii., p. 137.

Study for a Madonna, seated, and suckling the Child. The little S. John approaches on one side, his arms crossed; heads of old men and youths in profile, heads of lions, etc. Pen. (Müller-Walde, fig. 49.)

The Virgin reclining, the Infant Jesus beside her.—Three Infant Christs playing with cats.—Two children embracing each other. Pen, with a little red chalk. No. 204. Signor Morelli has mistakenly pronounced this drawing false. It is in Leonardo's early manner. (Grosvenor, no. 57; Braun, no. 186.) Two motives reproduced, vol. ii., pp. 44, 184.

The Virgin adoring the Infant Christ. The Child naked on the ground.—Head of an old man in profile. A microscopic drawing. Pen and silver-point. (Richter, pl. xl.)

Study for the drapery of the angel in the  
VOL. II.

*Virgin of the Rocks*. Body colour on washed paper. No. 223. (Grosvenor, no. 75; Richter, pl. xliii.; Braun, no. 196.) Reproduced, vol. i., pl. ii.

Study for the arm of the angel, in the *Virgin of the Rocks*, the forefinger out-stretched. No. 208. Washed drawing, heightened with white. (Grosvenor, no. 72; Braun, no. 241.)

Head of the Virgin. Three-quarters to the left, the eyes cast down, a veil twisted in her hair. Silver-point on blue paper. A very fine drawing of unquestionable authenticity. The prototype of Botticelli's *Virgin of the Magnificat*. Reproduced, vol. i., pl. iv. Study of a woman's head, not unlike that of the *Saint Anne*. Three-quarters, the eyes looking down to the right. In three different chalks. (Grosvenor, no. 18; Braun, no. 223.) Doubtful.

Study for the head of S. Anne. Three-quarters face, the eyes looking down to the left. Red chalk, heightened with white. Doubtful. (Braun, no. 222.)

Three studies of feet for the *Saint Anne* (one is numbered 77); the Child's uplifted foot, and a side view of a foot, turned to the left—an unfinished foot, seen from in front—a foot seen sideways turned to the right. Black chalk, on greyish blue paper. (Grosvenor, nos. 73, 74; Braun, nos. 244, 245.) Cf. vol. ii., p. 128–129.

See also below, under the heading: H. Draperies.

Study for a Madonna with the Child. The Virgin seated on the ground, one hand resting on the earth, the other supporting the Infant Jesus, as he blesses the little S. John.—A similar motive without the little S. John.—Two studies for the Infant Jesus bestriding a lamb. Red chalk. No. 203.

A naked child, seated on the ground, and holding what is apparently a vase. No. 57. Pen. On the reverse, notes in Leonardo's handwriting.

Study for an Infant Jesus, seen from behind (without the head), sitting on the Virgin's arm. Pen, washed with bistre. A drawing treated with much "bravura." On the reverse, notes in Leonardo's handwriting. (Braun, no. 205.)

Studies for two naked children, standing; one drawn with the pen, the other in Italian chalk. Lower down, an old man's head. No. 202. Doubtful.

Studies for the Infant Jesus, in profile, seated (two sketches).—Studies for the legs of the same. Red chalk. No. 207.

Study for a breast, once from in front, once from behind. Red chalk.

Several studies for the Infant Jesus, seated or lying down. Studies for the arms and legs. Silver-point on pink tinted paper.

The Infant Jesus, seated. Italian chalk. A mass of confused lines.

M M

Two studies (cut out) for the Infant Jesus and the *Madonna of Sant' Onofrio*. Doubtful. Red chalk, no. 206. (Grosvenor, no. 76; Braun, no. 206.) According to Signor Morelli, this drawing is by Cesare da Sesto (*Die Galerien Borghese und Doria Pamfili*, p. 212). I hesitate to pronounce it the work of Leonardo.

The Infant Jesus, a bust in profile to the left. Red chalk. No. 3. (Grosvenor, no. 99; Richter, pl. xlv.; Braun, no. 205.)

Figures apparently connected with the *Last Supper*. Persons standing or sitting. No. 63. Silver-point on pink paper. (Richter, pl. lii.) According to Herr Müller-Walde (fig. 74), this drawing is a study for the *Adoration of the Magi*.

A sketch for the *Last Supper*. The disciples seated at the table, Judas at the opposite side; Christ gives the elements to the Apostles, who bow before him.—A circle with a triangle. Autograph notes. Pen. (Grosvenor, no. 80.) Reproduced, vol. i., p. 177.

Study for the head of an Apostle, bald, with a short beard. In profile to the left. Red chalk. No. 21. (Grosvenor, no. 8; Braun, no. 214.)

The same head, turned more towards the background. No. 36. Red chalk. Reproduced, vol. i., pl. 9.

Study for the head of Judas. In profile to the right. Beardless. No. 33. Red chalk. Reproduced, vol. i., p. 188.

Study for the arm of S. Peter, holding the knife. Black chalk. No. 224. Reproduced, vol. i., p. 189.

Study for the head of an Apostle. Beardless, with frizzled hair, in profile to the right. Red chalk. No. 34. (Grosvenor, no. 9; Braun, no. 220.) Reproduced, vol. ii., p. 12.

The same head; in profile to the left. No. 26. Italian chalk. (Braun, no. 221.)

Study for the head of an Apostle, beardless, in profile to the right. No. 23. (Grosvenor, no. 10; Richter, pl. xlvii.) Reproduced, vol. i., p. 192.

Study for the head of S. Philip. In profile to the left. Black chalk. No. 27. (Grosvenor, no. 16; Richter, pl. lxviii.; Braun, no. 178.)

Study for the head of an Apostle, with frizzled hair and a short beard. In profile to the right. Black chalk. No. 40. (Grosvenor, no. 17; Braun, 219.) Reproduced, vol. ii. p. 13.

The *Last Supper*. The whole composition. A mediocre copy, in Italian chalk, of the mural painting. The background different. Inscribed with a note of no interest, relating to measurements: "B.  $4\frac{1}{2}$  el tuto . . . ornamento." (Braun, no. 180.)

*Pietà*. Washed drawing. Nothing to do with Leonardo. Perhaps by Gaudenzio Ferrari. On the reverse, in old writing: "Bernardino Luini." (Braun, no. 249.)

Christ descending into Hades, or S. John pointing out Jesus (*Ecce Agnus Dei*). Study for the figure of a naked man, stretching out his right hand, and holding the staff of a cross with his left. A beautiful drawing. No. 68. Silver-point on bluish paper. (Grosvenor, no. 94; Braun, no. 203.) Reproduced, vol. ii., pl. 24. See also p. 182.

*The Ascension* (?) Christ in the air, facing the spectator, his head slightly raised. No. 67; R. A. 98. Red chalk. A somewhat confused composition. Doubtful.

Study for the *Saint Jerome* in the Vatican. The saint is kneeling in exactly the same attitude as in the drawing reproduced by Gerli (pl. i.), save that here he holds a crucifix, which does not appear in Gerli's plate. Silver-point and wash, on grayish paper. (Grosvenor, no. 47; Braun, no. 202.) On the reverse: "Leonardo da Vinci, 53." Reproduced, vol. i., p. 80.

Two naked old men, kneeling. Study for a *Saint Jerome* (?). Bust of a man. Pen with a little red chalk. No. 76. Doubtful.

*Saint George and the Dragon*. (Four different motives.) Horses standing, rearing or lying down. A leopard. Nos. 46, 115. Pen, with a light wash. (Grosvenor, no. 59; Braun, no. 246. F. 72.) A fragment reproduced, vol. ii., p. 185.

A naked saint, his arms behind his back, bound to a column; the weight of his body rests on his right leg, his left is bent, and supported by a pedestal. Pen and red chalk, on red paper. Doubtful.

#### B.—*Mythological and Profane Subjects.—Various Scenes.*

*The Triumph of Neptune*. Black chalk. (Grosvenor, no. 48; Braun, no. 187.) Reproduced, vol. i., p. 140. M. Müller-Walde thinks the words inscribed on the drawing, "abassi i cavalli," are quoted from a poem which inspired the composition. It seems to me evident that they are merely a note by the artist, meaning that the horses must be lowered a little, to give greater prominence to the figure of Neptune.

Studies for the *Leda*. Four different drawings; the heads all three-quarters to the left, the eyes downcast, the hair elaborately dressed, in a network of braids, and twists like horns. One of the drawings, the most unfinished, bears the autograph inscription: "Questa si po levare e porre senza guastarsi." Roughly drawn with the pen, in yellowish ink; some portions seem to have been washed over with white. Only two of the drawings have been photographed by Braun, nos. 224, 225. Two fragments reproduced, vol. ii., p. 160-161.

A naked figure, standing, with head turned aside, in the attitude of the *Leda*. Very slightly

indicated, unfortunately. Beside it the head of a beardless old man, in profile to the right. Geometrical drawings. No. 27. Pen.

The wolf suckling Romulus and Remus. No. 28. Black chalk. Later than Leonardo.

The battle between Pyrrhus and the Romans. There are a few elephants among the forces of the King of the Epirus. The elephants, drawn from the artist's fancy, look like gigantic horses. On their backs are pavilions full of combatants. Red chalk, on red paper. R. A. 100-344.

Study of a young man's head, three-quarters to the right, the mouth half open. (*Battle of Anghiari*.) No. 44. Red chalk. Below, an architectural drawing. Pen. (Grosvenor, no. 13; Braun, no. 217.) Rep., vol. ii., pl. 21.

A troop of horsemen advancing towards the spectator. No. 113. Black chalk. F. 71. (Richter, pl. lvii.) Reproduced, vol. ii., p. 145. A perfectly authentic drawing, wrongly attributed to Cesare da Sesto.

Horses neighing and prancing, heads of horses, head of a man, shouting. Studies for the *Battle of Anghiari*. Pen. (Grosvenor, no. 87.) The rearing horse may, indeed, be a study for the *Adoration of the Magi*.

A group of combatants on horseback. Very confused. No. 31. Italian chalk. (Richter, pl. lvi.) F. 70.

A naked figure, seated, bound to a tree; behind him a man tightening the cord, and another, seated, his back to the spectator. Red chalk. (Grosvenor Gallery, no. 85.) According to M. de Geymüller (*Les derniers Travaux*, p. 9) this is a S. Sebastian. I should be more inclined to pronounce it a Marsyas. Not by Leonardo, nor even by any one of his school. R. A. 89.

A group of struggling horses. An incident of the Deluge. Very confused. Red chalk. R. A. 100; F. 342. (Richter, pl. xxxiv.) A fragment reproduced, vol. ii., p. 25.

Twenty-three naked figures, of small dimensions, engaged in various labours. Pen and bistre. Two naked figures, seated; a leg, raised; a woman, stooping as if to take a child from a cradle. Black chalk. (Grosvenor, no. 55.) Reproduced, vol. ii., p. 65. The standing figure holding a stick is closely akin to that in the British Museum, reproduced, vol. i., p. 1.

An allegorical composition. Utensils of all kinds falling in confusion from the cliff of a promontory, in torrents of rain. Below, the inscription: "O miseria umana di quante cose per danari ti fai servo!" Above: "Di qua Adam e di là Eva." No. 184. Pen. (Richter, pl. lxiv.)

Allegorical composition. A wolf or a bear in a boat. On the globe the date 1516 is clearly legible. This drawing must therefore have been executed in France. It is drawn with red

chalk, of a much darker tone than that commonly used in Italy. Reproduced, vol. ii., p. 45.

An allegorical composition. Persons running out of a temple, others advancing to meet them. Pen. (Richter, pl. lviii.)

Fantastic heads, copies of cameos, etc. No. 60. Pen. (Richter, pl. lxiii.)

An archer fitting his arrow to the bow behind a shield. A war-chariot, harnessed to two horses, standing still. A horseman galloping forward, his lance in rest, and two other lances fixed to his horse's breast, against a war-chariot like the one described above. Pen and wash. R. A. 84. F. 34. Reproduced, vol. i. p. 125.

A cannon foundry. Naked men raising a cannon or cylinder with a crane. Pen. A rough drawing, but full of vigour. Reproduced, vol. ii., p. 101.

A naked man, taking a naked woman by the waist. A landscape. A leg, etc. No. 26. Pen. Autograph notes. On the reverse, several men lifting hammers, and a flute-player, who seems to have been inspired by classic models.

Little figures, barely distinguishable. Italian chalk. No. 33.

Similar motives. Id. No. 84.

A naked man, pursuing a woman on the right. Above, figures reclining, or resting on their elbows. No. 43. Pen. Cut out. (Richter, pl. xxxviii.)

A person seated, turned to the right; another listens, his chin on his hand. A slight sketch in red chalk. On the reverse, a few words in Leonardo's handwriting.

A labourer driving a plough, drawn by two oxen. Little figures breaking the earth with pickaxes, etc.; barely distinguishable. No. 11. Red chalk.

Half a dozen little standing figures. No. 64. Pen. Almost microscopic.

Six men, standing, in various attitudes. Little pen drawings. Cut out. Nos. 92, 93, 95, 100, 103, 110.

Eight pen sketches, with autograph notes (heads, trees, a peacock, etc.). No. 47. The largest of these drawings, with figures on both sides, appears to be an atlas of natural history. It contains horses, a fox, a lion, a little figure entitled "Fortuna," bears ("orso, orsa,") etc. On the reverse, instruments, tools, plants: "scharsella, fieno, orcj (vases), fritto, ala (a wing), orecchi," etc. Each sketch bears an inscription. Pen. No. 106.

#### C.—Single Figures.

A young squire, standing, holding a lance in one hand, and resting the other upon his hip. Black chalk. (Grosvenor, no. 60; Braun, no. 193.) F. 73.

A young horseman in the saddle, a lance in

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his hand. Pen. (Grosvenor, no. 61; Braun, no. 193.) F. 73.

A horseman in full gallop towards the right, his lance in rest; below, two horses, falling to the ground. A little further, persons, very slightly indicated. Red chalk.

A young man, naked, facing the spectator; a drapery floats over his shoulders, his head is turned to the right, his left arm rests on his hip, his right arm hangs by his side, holding a club (?). Red chalk, on red paper. A very fine drawing.

A prisoner leaning on a stick, and holding out his hand for alms. Italian chalk, with a few touches of red chalk. Reproduced, vol. i., p. 137.

A naked man, stooping, his hands outstretched to seize something. No. 10. Italian chalk.

A naked figure, seated, in profile to the right, the left leg bent under the right leg. Lower down, a child, seated. No. 70. Italian chalk.

A person, standing, draped, seen from behind; very archaic. To the left, a study for a drapery. No. 21. Pen. Very small size. (Richter, pl. xxviii.)

A naked man, standing; by his side a man, three-quarters to the front; horse and horseman, and some geometrical drawings. Autograph note. F. 33a.

A man, in profile to the right, with a hood on his head. He bears a vague resemblance to Lorenzo the Magnificent. Pen drawing. No. 35. On the reverse, a sketch of a machine.

An aged man, standing, three-quarters length, in profile to the right. Pen. No. 23.

Two naked men, one of whom, his back to the spectator, seems to be pursuing the other. Machines, geometrical figures, etc. Red chalk. On the reverse, the number 30.

A young man with luxuriant hair; behind him the head of an old man. Pen. On the reverse, some figures, apparently in Leonardo's handwriting. Reproduced, vol. ii., p. 172.

An old man, draped in classic fashion, in profile to the right; a horseman, etc. Autograph notes. Pen. On the reverse, geometrical drawings. Reproduced, vol. ii., p. 8.

An old man, seated by a watercourse, in profile to the right; studies of whirlpools. Autograph notes. Pen and bistre. On the reverse, architectural drawings. Reproduced, vol. ii., p. 229.

A draped figure, three-quarters length, the head raised and turned almost full to the spectator, the left arm drawn into the folds of the toga; the head seems to be covered with interlaced serpents. No. 215. Red chalk. Chamberlain. (Braun, no. 195.) R. A., no. 101.

A bald, beardless old man, in profile, seated,

turned to the right, his hand outstretched. Red chalk. No. 37. (Grosvenor Gallery, no. 64; Braun, no. 211.) There is a replica of this drawing in the Royal Library at Turin (no. 14).

An old man, standing, in profile, draped in an ample toga, a roll of paper in his hand. (An advocate?). Italian chalk. Reproduced, vol. i., p. 245.

A young woman, standing, stretching out her left hand. In the background a landscape. No. 210 or 216. Black chalk. Reproduced, vol. i., p. 121.

A woman, standing, facing the spectator, a branch in one hand, the other resting on her hip; she wears a cuirass-like bodice. No. 84. Black chalk. Reproduced, vol. i., p. 13.

Another version, the right arm hanging down and the hand open; the left arm against the hip. No. 85. The same technique, and evidently belonging to the same series.

A woman, standing; her draperies very much twisted. Very archaic. A dog by her side; sketches of machines. No. 47. Pen. Autograph note.

#### D.—*Portraits and Studies of Heads.*

A large pen-drawing of eleven profile heads, all turned to the right: old men, young men, and young women. On the reverse, a study for the Virgin and Child, and thirteen profiles, turned to the right, heads of lions, a naked man, advancing hastily; on the right, a naked child walking towards the left. Specially noteworthy among these is the study of a young man, in profile to the right, with a large expressive eye, a delicately formed nose, an upper lip slightly curled (a charming motive), a rounded chin of exquisite outline, and curling hair. If one of these heads is the work of Leonardo, we may conclude that all are by him; the handling is the same, the ink, the pen (now very thick, now very fine), and the hatchings from left to right, and from above to below. (Grosvenor, no. 52.) Several fragments reproduced; vol. ii., p. 173, and see tailpiece, preliminary.

Ten studies of youthful heads, turned to the left; some bare, some in helmets, etc. Pen and bistre. (Grosvenor, no. 56.)

A beautiful profile study of a youth, turned to the left. Higher up, an old man's head, turned to the right; a standing figure, seen from behind. Black chalk. No. 47. On the reverse, fragments of machines.

Profile outlines of heads; the mouths open, as if to scream. Italian chalk and red chalk. Autograph notes. On the reverse, a map.

A series of beardless heads, in profile to the right. Torso of a man, seen from behind, turned towards the right. On the reverse, a horse's fore-leg and hind-leg. Pen. The page of a manuscript. Fol. 10a.

D. 1.—*Youths and Men in their Prime.*

Three heads of youths, in profile to the left. In ink; with several figures. Leonardo was long in search of this type—a youthful face, with deep, dreamy eyes, a slightly up-turned nose, and mouth shaped like a bow, somewhat approaching the English ideal of twenty years ago.

Two profiles of youths facing each other. A little drawing on greyish paper; much injured.

Two profiles of youths, side by side, turned to the right; one drawn with the pen, the other with Italian chalk. On the back, a tracing. No. 22.

Bust of a young man, bald and beardless, in profile to the right. Red chalk. (Braun, no. 210.)

Head of a youth, in profile to the right. No. 9.

Head of a youth, in profile. Black chalk. (Grosvenor, no. 16.)

Profile of a youth. Autograph notes. Pen. (Grosvenor, no. 54.)

Head of a young man, in profile to the left; a Neronian type. Pen and bistre. Doubtful, although there are some notes in Leonardo's writing on the back, and a sketch of a horse. F. 32.

Head of a man, in profile. (Grosvenor, no. 17.)

Bust of a bald, beardless man. In profile to the right. Red chalk. (Braun, no. 210.)

Head of a man in the prime of life, turned to the right. Red chalk. (Grosvenor, no. 20; Braun, no. 212.) A sheepish expression. There is a replica of this drawing at Turin, in the Royal Library, in which the head is crowned with laurel. Reproduced, vol. ii., p. 205.

Three heads of men, two full face, one in profile: illustrations for the *Trattato della Pittura*. Red chalk. (Richter, pl. xl.)

Head of a bald, beardless man, in profile to the right, with measurements and four autograph lines, in an opposite direction. (Richter, pl. li.) On the reverse this fine head is transformed into a man with a pointed beard, no. 8. Pen. Facing him on the left, a grotesque head (caricature), with shrunken nose, and protuberant upper lip, in profile to the right. Pen. The master evidently turned the transparent paper to account in working out this metamorphosis.

A man's head, three-quarters face, looking up. Silver-point on pink paper. In the manner of Lorenzo di Credi. (Braun, no. 252.)

Three heads, two full face, one in profile. Red chalk. (Richter, pl. xl.)

D. 2.—*Old Men.*

Portrait of Leonardo, in profile to the left. Red chalk. Inscribed, in capital letters: "Leonardo Vinci." Chamberlain. (Richter, pl. i.; Grosvenor, no. 1; Braun, no. 207.) Mended. The mouth less hard than it appears in the photograph. Reproduced, vol. ii., pl. 27.

Head of a beardless old man, powerful, but unsympathetic, with frowning brows. Life size, full face. No. 30. A very elaborate drawing. Sketched in Italian chalk, washed with Indian ink, and heightened with white. Apparently worked over. Chamberlain. (Grosvenor, no. 4; Braun, no. 209.)

Head of a beardless old man, with long curling hair; full face, the neck bare, the mouth contracted, the skin under the eyes baggy; an old Adonis who has become like a woman. A very elaborate drawing, washed with bistre and white; wonderful relief. Has perhaps been retouched. (Grosvenor, no. 2; Braun, no. 208.) Reproduced vol. ii., pl. 16.

Head of an old man, full face, beardless, with thick hair, bound with a wreath of leaves. A morose expression. Near him, a lion's mask. No. 38. Red chalk. (Braun, no. 213.)

A similar study. Red chalk. No. 22.

Head of an old man, three-quarters face, turned to the right; beardless, the eyebrows knitted, scanty hair. Italian chalk. A fine drawing, but as much in the manner of Dürer as in that of Leonardo. R. A. 95.

Bust of a beardless old man, in profile to the left, with a strongly-marked nose and chin, and head slightly raised. No. 10. Red chalk. R. A. 96.

Head of a beardless old man, crowned with laurel; in profile to the left. Red chalk. No. 54.

Large head of an old man, bald, with a beard, and a hooked nose, in profile to the left. A veritable Shylock. Italian chalk, on rough paper. No. 47.

Head of an old man, in profile to the left, a cap on his head. Silver-point, with a slight wash. No. 50. Delicate, but dry in handling. Doubtful.

Two heads of old men, cut out. In profile to the left. Nos. 20, 46.

Portrait of an old man, in profile to the left, with long hair and beard; a helmet with a visor on his head. Perhaps a portrait of Leonardo. Pen. Reproduced, vol. ii., p. 221.

Head of a beardless old man, in profile to the left. On one side, a machine. Pen, on blue paper. E. 20.

Head of a beardless old man, turned to the right. Beside it, the outline of a machine. Pen. No. 53. On the reverse, a ship, and some autograph notes.

Bust of a beardless old man, in profile to the right. Pen. No. 58.

Head of a beardless old man, in profile to the left, with a very aquiline nose and a long chin. Pen. No. 19.

Two heads in helmets, in profile to the right. Pen. No. 49. Reproduced, vol. i., p. 16.

A head in a helmet, in profile to the right; another head in profile beside it. Pen. No. 19.

Head of an aged man with a beard, almost in profile to the right; the forehead very wide and lofty. Pen. No. 42.

Three heads of beardless old men, in profile to the right. Cut out. Pen. Nos. 11, 16, 17.

Bust of a bald, beardless old man, in profile to the right. No. 7. Italian chalk.

Head of an old man, in profile to the left, his eyes fixed on some luminous point. Autograph notes. Pen. (Richter, pl. xxxii.)

Head of an old man, in profile, with measurements and an autograph note.—A naked man standing. Pen. (Grosvenor, no. 83.)

Head of an old man, with a long beard, his hair and moustache plaited. In profile to the right. Reproduced, vol. ii., p. 225.

Head of an old man, in profile to the right, with a prominent chin. No beard. Facing it, also in profile, the head of a man with thick lips and a receding chin. Pen and wash. (Braun, no. 236.)

Bust of a beardless old man, with strongly marked features, and an aggressive expression, in profile to the right. Thick hair. No. 37. Red chalk. (Grosvenor Gallery, no. 19; Braun, no. 218.) See vol. i., p. 238.

#### D. 3.—*Women.*

Studies of female heads and hands. Three large drawings in silver-point on pink tinted paper. The one with the heads is numbered 49. Doubtful.

Head of a woman, full face, looking towards the left. Red chalk. (Grosvenor Gallery, no. 14; Braun, no. 252.) Not by Leonardo.

Head of a young woman, full face, looking towards the left, her neck bare. In colour. (Braun, no. 253.) Not by Leonardo. A note in pencil ascribes it to Giampietrino.

A young woman, with serious features, almost full face, turned slightly to the left, the nose rather short, vacant eyes, the hair concealed by a head-dress. No. 45 or 46. Red chalk. (Braun, no. 226.) Very doubtful.

A woman, half length, three-quarters face. Cut out. Italian chalk. Doubtful.

Head of a young woman with flowing hair, three-quarters face, the eyes rather haggard; looking to the left. Silver-point on bluish paper. (Grosvenor, no. 6; Braun, no. 228.) Reproduced, vol. i., pl. 13.

Head of a woman, three-quarters to the right, the eyes downcast, the hair in disorder. Italian chalk, on prepared paper. Nothing to do with Leonardo. A modern inscription below attributes this drawing to Gaudenzio Ferrari. But the delicate, vaporous handling is just as closely akin to that of Sodoma. (Braun, no. 256.)

Head of a young woman, three-quarters face, turned to the right. No. 15. A slight sketch in red chalk. On the reverse, a man ascending, another descending; a knee, an eye, and the lower part of a naked figure. Pen.

Bust of a woman, three-quarters face, turned to the right, the head barely indicated, the shoulders bare, the dress cut open across the breast. No. 217. Red chalk on red paper.

Head of a young woman, with wavy hair; three-quarters face, looking to the right. No. 14. Red chalk. (Braun, no. 231.) On the reverse, a whole page of Leonardo's handwriting.

A similar head, drawn with the pen, appears in one of Leonardo's MSS., in the parcel marked *Varia*.

Head of a young woman, three-quarters to the right; the eyes downcast. On one side, the head of a beardless man, also turned to the right. Red chalk. Two men carrying a litter. A dial, etc. Pen. Autograph notes.

Head of a young woman, in profile. She bears a strong likeness to the young woman of the Vallardi Collection. (Braun, no. 168.) The head-dress and gown are the same; but the head is less inclined, and the expression less sentimental. Turned to the left. Silver-point, on blue paper. (Grosvenor, no. 5; Braun, no. 229.) Reproduced, vol. i., p. 5.

Head of a young woman, in profile to the right; the eyes downcast; the features rather heavy; the nose short and straight; the chin prominent. She bears a striking likeness to Luini's *Saint Catherine* (portrait of the Contessa di Cellante) in the Monastero Maggiore at Milan. I should therefore ascribe this drawing, not to Boltraffio, as does the note pencilled upon it, but to Bernardino Luini. (Grosvenor, no. 7; Braun, no. 230.)

Portrait of a young woman, in profile to the right. Silver-point, on pink paper. A beautiful drawing. Reproduced, vol. i., p. 4.

Portrait of a woman, in profile to the right. Black chalk; the outline pricked as if for pouncing. Certainly not by Leonardo. No. 48. The type, a very unattractive one, bears a certain likeness to that of Theodorina Cibo, daughter of Pope Innocent VIII. (Braun, no. 234.)

A woman, half-length, in profile to the right. A haughty expression. No. 39. Italian chalk, with a little red chalk. Authentic, though slightly affected. (Braun, no. 232.)

*E. Caricatures.*

Five grotesque heads. Among them a so-called portrait of Dante. Pen. Reproduced, vol. i., p. 249. This drawing should be compared with similar ones in the Louvre and the Weimar Museum. On the reverse, several lines in Leonardo's handwriting.

Eight grotesque heads of men and women, all in profile. Pen. (Grosvenor Gallery, no. 22 ; Braun, no. 237.)

Five grotesque heads, cut out, all in profile (four to the right, one to the left). Nos. 29, 39, 62, 63. Pen. Great freedom in the handling.

Four grotesque heads, facing each other, in profile, two male, and two female. Red chalk. No. 43. (Grosvenor, no. 23 ; Braun, no. 236.)

Two heads, facing each other. One, an old man turned to the right ; the other, with a pointed nose, turned to the left. No. 37. Pen.

A grotesque head of a man, and one of a woman, facing each other ; the man in profile to the right : the woman in profile to the left. The woman wears a high head-dress. No. 36. Pen.

Two heads. A woman, in profile to the left ; the nose shrivelled. She wears a high head-dress, and stretches out her hand. The man, three-quarters face, grinning. Pen.

A grotesque personage, in profile, with a broken nose and nut-cracker chin. (Braun, no. 236.) This type re-appears twice in the Duke of Devonshire's collection, (Braun, nos. 46 and 49) once alone, once, as at Windsor, facing an old woman, whose hair, elaborately dressed in a pyramid, recalls the head-dress of a Marquise of the last century.

Head of an old man, in profile to the right, looking up ; a cap on his head. No. 13. Pen.

Head of an old man, in profile to the right, no beard, prominent nose and chin, a cap on his head. No. 60. Pen. On the reverse, an inscription in Leonardo's handwriting.

Head of a beardless man, in profile to the right, with a prominent chin. No. 66. Pen.

Head of a grotesque personage, in profile to the left ; the lower lip thrust out. Pen.

Bust of a stout, beardless old man, in profile to the right, the lower lip thrust out. No. 24. Pen. On the reverse, a face, lightly sketched.

Head of a beardless old man, in profile to the left. No. 20. Pen.

Two grotesque heads of old men, facing each other. One, with toothless jaws, in profile to the right, bears a vague resemblance to the so-called *Savonarola* in the Albertina at Vienna ; the other has thick lips, and a nose disproportionately short. No. 52. Pen. (Braun, no. 238.)

An old man with a hooked nose, in profile to the right. Pen.

A grotesque old man, with a straight nose and

disordered hair, in profile to the right. No. 19. Pen.

A beardless old man, in profile to the right, a high conical cap on his head. No. 33.

Grotesque heads. Cut out.—Head of a beardless man, in profile to the right. No. 65. Pen.

Idem, with a pointed nose. No. 48. Pen.

Idem, with a beard and an aquiline nose.

Idem.

Idem.

Idem, no. 31.

Head of a bearded man, in profile to the right. His hands on a stick. No. 25. Pen, on bluish paper.

Bust of a beardless old man, in profile to the right, with a very strongly marked nose and chin, a cap on his head. Pen.

An aged person, with a hooked nose, in profile to the right, his hair pulled over his forehead. Some cyphers on the sheet. No. 7. Pen. Cut out.

A beardless, bald old man, half-length, in profile to the right. No. 22.

An old man, in profile to the right, no beard, his chin almost touching his nose. No. 2. Pen.

Beardless old man, profile to right ; prominent nose, retreating chin. Pen.

Grotesque head of a woman, nose atrophied, enormous chin, extravagant head-dress. Red chalk. No. 32. (Grosvenor Gallery, no. 24 ; Braun, no. 239.)

Head of an old woman with a *goltre*. The upper part of the head wanting. Profile to the right. On the back some of Leonardo's writing. Pen. No. 59.

*F.—Torsoes, hands, feet and other fragments.*

Two male torsoes (after the statue of Pasquin?). A horseman and two men on foot, fighting. The profile of a leg, turned to the right. Pen and red chalk. Autographic inscription. (Richter, pl. xxi. ; Braun, no. 204.)

Study for the hands in the *Mona Lisa*. Higher up, the profile of an old man, in small. According to Mr. Holmes this drawing has to do with the *Hora*, at Hampton Court. No. 210. Silver-point, heightened with white, on pink paper. See above, vol. ii., p. 157.

Two hands, interlaced. No. 212. Italian chalk. (Grosvenor Gallery, no. 71 ; Braun, no. 240.)

Front of a hand, resting on a table. Red chalk. (Grosvenor Gallery, no. 68.)

The same hand seen in profile. No. 211 ? Red chalk. (Grosvenor Gallery, no. 67.)

Very slight studies of hands, in silver-point, on pink paper. A right hand, with the first finger extended to the right, can be dis-

tinguished. Two sheets ; on the reverse of one the number 28.

Clenched hand, a confused mass below. No. 74. Red chalk, with a few white touches. (Grosvenor Gallery, no. 93 ; Braun, no. 242.)

A right leg, extended. Pen and red chalk.

A left leg, seen from behind. Pen, on blue paper.

A right leg, seen from the front. Pen, on red paper.

A right leg, much bent, seen from in front. Pen.

A right foot, seen from in front. Red chalk. Autograph notes on the back.

An eye, in profile, looking to the right. No. 69. Pen.

Two eyes, in profile, looking to the right. One in red, the other in Italian chalk.

An eye turned to the right. Black and red chalk.

#### G.—Anatomy.—Proportions.—Attitudes.

The anatomical drawings at Windsor have all either been published or are about to be. (Mathias Duval et Bical, *L'Anatomie des Maîtres*, Paris, 1890-1891.—Sabachnikoff, Piumati, and Mathias Duval, *I Manoscritti di Leonardo da Vinci della Reale Biblioteca di Windsor. Dell' anatomia*, vol. i., Paris, 1898, *et seq.*)—(Grosvenor Gallery, nos. 39-44 ; Richter, plates cvii.-cviii.)

I shall content myself here with giving a short indication of what this precious collection contains.

97 V.A. Eighteen sheets published by M. Sabachnikoff.

B. Forty-three sheets (blue paper).

Wrapper no. 3. Studies of proportion. Eleven drawings, or sheets of drawings, among them a beardless male profile, turned to the left, accompanied by measurements, beside it a standing figure. Silver-point and pen. (Richter, pl. x.)

D. Drawing relating to the process of generation ; foetus, etc.

E. Twenty-two sheets of drawings on blue paper.

F. 39-47. Sketches of the vertebræ, etc.

Wrapper no. 9. Sixty-five drawings on blue paper, white paper, etc.

A naked man, standing, front face, his legs and arms stretched apart, holding a staff in his left hand, no beard. No. 69. Red chalk. (Braun, no. 200.)

A younger man, in the same attitude, but with his arms nearer to his sides. Red chalk. No. 61. (Grosvenor Gallery, no. 79 ; Braun, no. 199. Reproduced in Manzi's edition of the Vatican *Trattato*, pl. vi., fig. 16.)

A bearded man, in the same attitude. Red chalk. (Braun, no. 197.)

The same, seen from behind, with an autograph note. Red chalk. (Braun, no. 198.) Reproduced in Manzi's edition of the Vatican *Trattato*, pl. vi., fig. 16. See also vol. ii., pl. 14.

A naked man, front face, from the breast downwards, the legs set apart ; with an autograph note. On the back, two figures, one a front view, the other seen from the back. No. 55. Italian chalk. (Braun, no. 201.)

A naked man, same pose, but turned more towards the right. Italian chalk.

A naked man, front face, standing, the legs apart. Pen. No. 105.

A man running towards the right, seen only from the loins downwards. No. 73. Pen and red chalk. Autograph note.

Profile of a naked man, from the lower part of the chest to the feet. Turned to the left. Study for the right arm and right breast of a male figure. Silver-point on blue paper.

A naked man, standing, only the left side finished. Silver-point, on blue paper.

Male torso, without the head ; the arms brought to the front. No. 80. Red chalk, on red paper.

#### H.—Studies of Drapery.

Studies of drapery for the lower parts of two seated figures. No. 122. Italian chalk. Has to do with the *Saint Anne*, as have also the following somewhat nondescript studies :—

Study of drapery for the lower part of a seated figure. No. 226. Italian chalk, heightened with white, on grey paper.

Fragment of drapery over a knee. Italian chalk, on red paper.

Study of drapery for an arm, turned to the right. The hand holds some object not easy to identify. No. 213. Black and red chalk, heightened with white, upon red paper.

Study of draperies, somewhat confused. No. 201. Black chalk and wash, on grey paper.

Study for the drapery on the Virgin's right leg. On the back, geometrical drawings. No. 219. Italian chalk, heightened with white. (Grosvenor Gallery, no. 100.) See vol. ii., pl. 18.

Study for a sleeve. No. 213. Red chalk, heightened with white, on red paper. (Grosvenor Gallery, no. 70.)

A similar drawing. No. 214.

Study of folds. Pen, heightened with white, on red paper.

Study of folds, the lower part of a robe. On the back a nude male figure, standing, seen from behind and turned to the left. Pen, on paper tinted pink. Of very doubtful authenticity.



I. *Studies for the Sforza Monument and various studies of Horses.*

Studies for the Sforza group. A rearing horse, turned to the right, its rider stretching out his right arm. An equestrian statue on a pedestal, a fallen man raising himself to defend himself against the horse. A similar drawing. Another, no. 17. Pen. Rather archaic in appearance and clumsy in its proportions. R. A., no. 70. F. 37. (Richter, pl. lxvi.; Braun, no. 181.)

A rearing horse. Five heads of neighing horses. A lion's head. Profile head, to the right, of a man shouting; analogous to the Medusa in the *Scipio* of the Rattier Collection. A horse trotting, with his head turned towards his flank. On the back, autograph notes, a horse's head, and some geometrical drawings. F. 65. Reproduced, vol. i., p. 161.

A rearing horse, to the left, head to the right. Italian chalk. F. 66.

Two groups of horses biting each other. A horseman beating a half-fallen horse. Two men, one pursuing the other. (? Studies for the *Battle of Anghiari*.) No. 109. Pen. F. 67. On the back: Study for a bodice. Red chalk. A horse rearing, to the left, and throwing back his head. No. 112. Red chalk. F. 68.

Studies of horses. Heads of old men, turned to the right. Standing figures. (An angel raising the right hand, not by Leonardo.) Drawings of machines. On the back: horses in various attitudes, one in profile, and geometrical figures. No. 53. Pen. F. 59.

Horse charging to the right and neighing. Higher up, the hind quarters of another horse. No. 111. Silver-point, on pink paper. F. 62.

A horse rearing to the right, over a tree trunk. The armed rider holds a sceptre in his right hand. No. 3. Silver-point on blue paper. R. A. 66. F. 36. Reproduced, vol. ii., p. 5. (Original of one of the horses reproduced, vol. i., p. 223.)

Three horses in profile, moving to the right. The lowest carries a horseman, who holds a sceptre in his right hand. No. 12. Italian chalk. R. A. 69; F. 38. The lower part reproduced by Dr. Richter, pl. lxx. (Braun, no. 182.)

A horse rearing, to the right, over a prisoner. The naked rider brandishes a sword in his right hand. Lower down, an indication of architecture. No. 45. Italian chalk. R. A. 66. F. 35. Partly reproduced, vol. ii., p. 160.

Sketches of machines, and small profile of an old man, turned to the right. Frame for a charging horse. MS. fragments. R. A. 81. F. 60.

Frame for an equestrian statue, etc. No. 30. Pen and red chalk. R. A. 79. F. 53.

A similar drawing. Pen. F. 59. Autograph notes on both sides of the sheet.

VOL. II.

Sketches for the frame of an equestrian statue. Long autograph notes. F. 52.

A similar item. F. 51.

Sketches for circular and rectangular pedestals for the equestrian statue, and for various machines. No. 18. Pen. Notes. R. A. 78.

Equestrian group, horse rearing. F. 46.

An equestrian group, the horse moving to the left, its rider turning in the saddle. Lower down, a pedestal with a recumbent statue. No. 49. Pen and red chalk, corrections and alterations in red chalk. On the back a tracing (? more recent in date) of the horse. R. A. 67. F. 39. Reproduced, vol. i., p. 157.

A rearing horse; the rider, seen from behind, stretches his right hand out backwards. No. 114. Silver-point on blue paper. Autograph notes on the back. R. A. 67. F. 40. Reproduced, vol. i., p. 213.

Front view of a horse. High upon the left, the back view of a horse. Autograph note. Pen. F. 48.

Front view of a horse. No. 124. Silver-point, on blue paper. F. 28.

Horse, in profile to the right. Hind quarters of another horse in the same position. Silver-point on blue paper. F. 29.

Horse, in profile to the right. Chest and fore-legs of another horse. No. 105. Silver-point, on blue paper. R. A. 77. F. 56. Reproduced, vol. i., pl. 6.

Profile to the right of a horse, standing. Profile of a "near" hind-leg; the same leg seen from behind. No. 35. Pen. F. 1.

Horse walking, to the right. Lower down, a three-quarters view of a horse walking to the right. Another horse, seen from behind. Pen and chalk. A horse carrying a rider whose right arm is stretched out behind him. R. A. 74. F. 45. (Braun, no. 184.) Rep., vol. i., pp. 44, 89.

Four horses, three of them mounted, walking towards the right. Indications of other horses. No. 19. Italian chalk. R. A. 75. F. 57. (Richter, pl. lxxiii.) The centre of drawing reproduced, vol. i., p. 148.

Five horses, one in profile to the right, another seen from behind, etc. A very small horse moving to the left. No. 48. Silver-point and chalk, on pink paper. F. 15.

Horse in profile, moving to the right, A horse's head. Italian chalk. F. 44.

A horse moving to the right, his rider holds a sceptre outstretched. No. 50. Pen. R. A. 80. F. 43.

Five horses, some with, some without riders, [All have riders, but on two these are but slightly indicated.—ED.] No. 121. Black chalk or pen. (Richter, pl. lxix.)

Horse upsetting an urn. Two horses rearing over an enemy. Two horses walking. R. A. 65. F. 41. Partly reproduced, vol. i., p. 156.

Two horses in profile, one standing, the other

N N

moving to the left. Indications of more horses, one with a rider. No. 103 (?105). Same technique. F. 9.

Horse in profile, turned to the left. Hind-quarters of another horse. No. 42. Pen, with diagrams. F. 33.

Horse moving to the left. Very small. No. 18. Pen. Reproduced, vol. ii., p. 132. F. 24.

Horse harnessed between two wheels and bearing a rider. Pen and red chalk. F. 23.

Back view of a horse lying down. Front face of a woman. Vague sketches. Pen. F. 31a.

Standing horse, turned to the left. Fore-foot of another horse. Autograph notes. Silver-point, on blue paper. On the back, a horse in red chalk. No. 113. F. 31.

Sheets of studies of horses, mostly taken from manuscripts. F. 81.

Fireworks springing from three points. Pen. On the back a horse rearing, to the left, and two women with a child, etc. No. 26. Italian chalk and pen. F. 74.

Two heads of horses, profile and front face, with notes. Two fore-legs of horses. No. 13. Italian chalk, with notes in ink, on pink paper. R.A. 76. F. 54.

Two heads of horses, profile to the right and front face. Lower down, a horse seen from behind, and another turned to the right. No. 120. F. 32a. Reproduced, vol. i., p. 128.

Head of a horse, turned, to the left. No. 116; ditto, to the right, no. 117. Red chalk. Doubtful.

Head of a horse, neighing. No. 89. Pen. An autograph note on the back. No. 247. F. 25.

Front view of a horse's chest. Two hind-legs. No. 110. Pen, on brownish paper. F. 11.

Fragment of a horse moving, to the left. No. 15. Italian chalk. On the back, the hind-quarters of a horse: a fore-leg and chest. Pen and black chalk. F. 16.

Middle-piece of a horse, in profile to the left. Black chalk heightened with white, on blue paper. F. 22.

Hind-quarters of six horses. No. 103. Red chalk. R.A. 71. F. 47. Reproduced, vol. i., p. 152.

Fragmentary studies of horses; one in profile to the right; a fore-hand, with raised leg; two hind-quarters. No. 100. Italian chalk. F. 9.

Four studies of a horse's hind-quarters. No. 119. Pen. R.A. 72. F. 50. Reproduced, vol. i., p. 153.

Hind-quarters of a horse rearing, to the left. Black with a little red, chalk. F. 63.

Hind-quarters of a horse rearing, to the left; indications of two more horse. Italian chalk, slightly washed. F. 64.

Unfinished sketch of a horse, moving to the right. Hind-quarters of another horse. No. 39. Pen, on pink paper. F. 13.

Hind-quarters of a horse, turned to the left. Part of a horse seen from behind. A horse's nostrils. No. 47. Silver-point, on pink paper. F. 14.

Four fore-legs, two turned to the right, the other two to the left. No. 104. Silver-point, heightened with white on pink paper. F. 20.

Two fore-legs raised and one straight. No. 102. Red chalk. F. 3.

Two fore-legs, seen in profile; a fore-hand, with both legs: a bent fore-leg. No. 101. Red chalk. F. 19.

Study for a near fore-leg, with autographic notes and figures. Pen. R.A. 72. F. 49.

Measurements of fore-legs, two straight, two bent. Autographic notes. Pen. On the back, tracings from the same. F. 55.

Profile of a near fore-leg, turned to the left. No. 16. Red chalk. F. 2.

Fore-leg, in profile. No. 20. Italian chalk and pen. On the back, a palace with flanking pavilions and a bridge in front. Italian chalk. F. 18.

A near fore-leg. No. 38. Pen, with slight wash. F. 27.

Profile of a fore-leg. No. 9. Pen. F. 26.

Fragmentary drawing of a horse raising his off fore-leg. Fore-leg of another horse. Pen and Italian chalk. On the back, slight sketches of more legs. F. 17.

Hind-leg raised and fore-shortened. Other hind-legs. Slight indications of a horse, moving to the right. No. 21. Pen, on pink paper. F. 12.

Four horses' legs. Italian chalk. On the back, a leg (pen) with figures, and another leg (red chalk). Three-quarters head of a bearded man, looking to the left: front face (nearly) of a beardless man. No. 23. Pen. F. 30.

Slight sketches of legs. No. 33. Italian chalk. F. 6.

Confused sketches of legs. No. 34. Silver-point, slightly washed. F. 5.

Five legs. No. 106. Pen, on blackish paper. F. 8.

Four legs, similar to the last. No. 118. Same method. F. 10.

Four legs, three in profile, all raised. Red chalk. F. 4.

#### J. *Various Animals.*

Head of a lion, with an autograph note. No. 115. Pen, with a little red chalk. F. 77.

Muzzle of a lion, in profile to the right. Head of a lion, front face. No. 17. Italian chalk. On the back, head of a beardless old man, in profile; on the right, a foot, etc. Geometrical figures. Autograph note. Pen.

Studies of cats, leopards, and a dragon. Pen. Autograph note. F. 72a. (Grosvenor Gallery, no. 58; Braun, no. 247.) Partly reproduced, vol. ii., p. 185.

Head and forepart of the body of a fox, in profile. Hinder parts of the same. No. 122. Red chalk.

Camel. Very minute pen-drawing. Doubtful. Attributed by a modern annotator to Pisanello.

Horse or camel, seen from behind; at the side another animal of the same kind. To the left, two legs. Pen. On reddish paper. F. 21.

An ox, standing, turned to the left. No. 25. Pen and Italian chalk, on grey paper.

An ox, moving to the left. An ass lying down; another ass moving to the right; another ass, ridden by a man. No. 30. Pen and Italian chalk.

An ox lying down, facing to the right. On the back a sketch of a recumbent animal. No. 37. Red chalk. Doubtful.

Two dogs' heads, one in profile to the right. (no. 27), the other to the left. Pen.

A pelican or phoenix. 97 V. No. 76. Pen, on purplish paper.

Three dragons. No. 52. Italian chalk and pen. On the back, a study for a cuirass or flowered bodice. Pen.

Profile head of a monster; a human head with curved horns, the mouth open, wings instead of ears, a goitre falling from each cheek and pendant breasts. No. 42. Pen and red chalk. R. A. 99.

A monster, with four paws, armed with claws, and a bristly head, moving to the right. Pen and Italian chalk.

Two heads of monsters, seen from in front; one rather like a dog. Pen. No. 40. (Grosvenor Gallery, no. 37.)

Profile of a monster, looking to the right. Two monsters, seen from in front; the one horned. No. 29. Pen. (Grosvenor Gallery, no. 36.)

Profile of a monster, seated, and playing the clarinet. Autographic notes and geometrical diagrams on the back.

#### F. *Trees—Plants—Fruits.*

A tree. No. 187. Pen, on blue paper. (Grosvenor Gallery, no. 77; Braun, no. 248.) Reproduced, vol. ii., p. 93.

A tree with its roots. No. 131. Pen.

Two trees, with their roots very apparent. No. 99; V. 17. Pen.

Six detached studies, differing in size (nos. 131, 133, 154), of plants, leaves, flowers, berries, acorns (five in red chalk, one a pen drawing). On the back of no. 133, the profile of a beardless man, turned to the right.

A lily. No. 199. Pen drawing, washed with yellow; has been used for pouncing. (Grosvenor Gallery, no. 97.)

A plant, with thorns and berries. No. 152. Pen. (Grosvenor Gallery, no. 27.)

Six sheets of studies from flowers and plants. Campanulæ, no. 195. Red chalk. Reproduced, vol. ii., p. 89. Strawberries, no. 131. Reeds, no. 126; on the back, another plant. Tree and iris leaves. Flowers, no. 130. Reproduced, vol. ii., p. 256. Two heads of bulrushes ("Gionchi"), no. 153. Pen and red chalk. (Grosvenor Gallery, nos. 25-35.)

#### K. *Landscapes and Topographical Drawings.*

Landscape with mountains. (Grosvenor Gallery, no. 45; Richter, pl. xxix.)

Group of trees, no. 127. Red chalk. (Grosvenor Gallery, no. 46?) On the back, another tree with the words "Quella parte" in Leonardo's writing.

Landscape, with a stream and a ferry. Pen. (Grosvenor Gallery, no. 62.)

Landscape, with buildings on the right—castle, viaduct, etc. Pen.

Seven landscapes or fragments of landscapes, in red chalk. One of them represents the Alps. Several of them bear autograph notes more or less long. Nos. 172, 181, 194, 196, 197.

Landscape, with a waterspout or scene from the Deluge. No. 137. Red chalk. Richter, pl. xxix. Reproduced, vol. ii., pl. 15.

Five highly-finished little landscapes, three with the pen (nos. 133, 124), and two in red chalk (no. 138); buildings, panoramas, a lake or sea.

The front of a castle, with a large round tower in the middle, and the spire of a chapel; the Château d'Amboise, according to M. Lafenestre. No. 173. Red chalk.

Study of dolomites. No. 199. Large pen drawing.

Four studies of rocks, etc. Nos. 160, 166, 182 (one has no number), mounted on one card. Italian chalk.

Another study of rocks; lower down, on the same mount, two ducks. Pen. No. 136. Doubtful.

Study of rocks, or rather of stratification. No. 161. Pen.

Five studies of waves, whirlwinds, hurricanes and cyclones. Italian chalk or pen. One is numbered 139, another bears several lines in Leonardo's writing.

Five more drawings of waves and rocks. Nos. 132, 135. On one, two autograph lines.

Five studies of whirlwinds, waves, etc. Italian chalk. Nos. 143, 144, 145, 161. The other numbers are not very clear. (Cf. Richter, pl. xxxiv.-xxxvii., xxxix.)

Study of whirlwinds and scene from the Deluge. No. 107. Pen and wash. Fol. 76. (Richter, pl. xxxiv.) Partly reproduced, vol. ii. p. 25.

Nine geographical charts, mostly in water-

colour (Tuscany, Prato, Faenza, Imola, Ferrara, with the Via Appia, etc.—“Miglia 56 per Arno da Firenze a Vicho,” etc.) Nos. 125, 167, 169, 170, 171, 177, 190. The names are written partly from right to left, partly in the ordinary way. (Richter, pl. cxi.-cxiv.)

Map of the world, 1513-1514. In 8 segments. Not by Leonardo. Nos. 192, 193. Names sometimes in capitals, sometimes in cursive writing, and not in Leonardo's hand. (See vol. ii., p. 94.)

Six plans. Nos. 131, 133, 154. On the back of 133, the profile of a beardless man looking to the right. In Italian chalk.

#### M. *Architecture and Varia.*

A column crowned by a vase, on which a naked child kneels, and blows water into a basin. Pen, with a little red chalk, on bluish paper. No. 51.

A column supporting a man who holds a basket, from which springs a jet of water; to the side, another idea for a fountain. Pen and red chalk, on blue paper. No. 122. (Richter, pl. ci.) Reproduced, vol. ii., p. 153.

A rusticated palazzo; to the right, a portico; in front, a garden with a fountain, and a stream. No. 193. A highly finished water-colour. On the back, plans: “tenga si sempre piene le cisterne.” G. 7.

A halberd; an instrument resembling a torpedo, etc. No. 5. Pen.

Emblems. A plough (“oñi impedimento è distrutto dal rigore”). Profile of a young man or woman, turned to the left. A cut-out design (? a caduceus.) No. 44. Pen. On the back, various drawings; a bodice, which may well be a study for the two fine standing figures of women described above, p. 268. No. 73.

Another plough (“hostinato Rigore”). Blue background, as in the “Destinato Rigore.” Reproduced, vol. ii., pp. 8, 9.

Varia, 97 V. Leaves from MSS. containing all kinds of sketches: A man's head, in profile to the left, looking up towards a point of light. (Richter, pl. xxxii.) A skull; a column, etc. Silver-point, on blue paper. Geometrical diagrams; three-quarters head of a young woman, turned to the right. Pen. And a number of small cut-out drawings.

#### VARIOUS COLLECTIONS.

##### *Collection of the Duke of Devonshire, K.G., at Chatsworth.*

I. Studies for the heads of the Virgin and S. John the Baptist in the *Virgin of the Rocks*. Silver-point, on greenish paper. (Braun, no. 48.) Reproduced, vol. i., pl. vi.

II. *Leda and the Swan*. With one knee on the ground and the other half bent, Leda draws

the amorous bird towards her with her left hand, while, with her right, she picks a flower. Not in Leonardo's manner; perhaps by Sodoma, to whom Morelli ascribes it. Should be compared with the drawing at Weimar.

III. Portrait of an old man, with a prominent chin and no beard. This seems to me to represent—with some slight exaggeration—the same individual as the Ambrosiana drawing. (Brogi, 7421. Braun, no. 40.)

IV. Three separate drawings, one with a procession; the second, an old man declaiming, seen to the waist; the third, seven heads of Abbés. Only the second is in the manner of Leonardo; the first and third are not even of the sixteenth century. (Braun, no. 52.)

V. Four studies of heads. A he-goat. The two upper male heads, fine as they are, have nothing to do with Leonardo; neither has the goat. All three are indisputably the work of Pisanello (the goat recalls the medal of Cecilia Gonzaga, where he is metamorphosed into a unicorn). As for the heads below (the one an old man, with a huge chin and no beard, turned to the right, the other a man wearing a falling cap and with a grin on his face) they are indeed in Leonardo's manner, but I should not venture to pronounce upon their authenticity. (Braun, no. 46.)

VI. Four grimacing profiles, all turned to the right. Thoroughly characteristic of Leonardo. (Braun, no. 53.)

VII. Four heads, caricatures, on two sheets of paper, arranged in pairs, facing each other. In Leonardo's manner. (Braun, no. 55.)

VIII. Four heads, separated, and facing each other; two caricatures, male and female; front face of a beardless man; profile of another. These seem to me copies. (Braun, no. 54.)

IX. A man and a woman, to the waist, facing each other. The man's head is identical with that in Braun, no. 46. A copy or forgery. (Braun, no. 49.)

X. Profile portrait of a middle-aged man to the right; very slight beard. Red chalk. A blurred drawing, of doubtful authenticity. (Braun, no. 50.)

XI. A man of a Rabelaisian countenance, embracing a female of corresponding appearance; both seen to the bust. Nothing to do with Leonardo; the workmanship German. Below, two genii supporting the Medici arms. (Braun, no. 56.)

##### *Captain Holford's Collection, Dorchester House, London.*

A horseman, in profile. Study for the Sforza monument. I only know this drawing through a communication made to me by Mr. Sidney Colvin, Keeper of the Prints at the British Museum.

*Mr. William Russell's Collection.*

I. Caricature; a head crowned with a vine branch. Is called a caricature of Dante. Pen and bistre. Formerly in the Dumesnil Collection.

II. A horse's skull. Anatomical study. Reduced replica of a drawing in the British Museum. Pen and bistre.

III. Anatomical drawings of a man and a horse. Pen.

IV. Female head. Red chalk. (See the Grosvenor Gallery Catalogues, 1877-1878, nos. 671, 672, 676, 814.)

*Earl of Warwick's Collection.*

A woman's head, almost in profile, the eyes turned upwards. Probably a study for the Virgin in the Louvre *Saint Anne*. A highly-finished drawing. (Engraved in the Grosvenor Gallery Catalogues, 1877-1878, no. 675.)

*The Rev. W. H. Wayne's Collection.*

Study of a head, in coloured chalks. From the Richardson and Hudson Collections. (Grosvenor Gallery Catalogues, 1877-1878, no. 727.)

## DRAWINGS WHICH HAVE DISAPPEARED.

A Virgin, and two female heads in profile. Belonged to the Elector Palatine. (Venturi, *Essai*, p. 51.)

The *Circumcision*. (*Lettere pittoriche*, vol. ii., letter no. 92.)

Two children, monsters, one with a double head. (Lomazzo, *Trattato*, etc., p. 637.)

Portrait of Amerigo Vespucci. According to Vasari, Leonardo made the portrait of the famous geographer. It was a splendid head of an old man, done in charcoal. De Toni doubts whether Leonardo could have painted Vespucci in his old age. Vespucci, he says, was not yet forty when Leonardo quitted Florence. He thinks it must have been the traveller's grandfather whom Leonardo painted; his name was also Amerigo. (*Ritratto Leonardesco di Amerigo Vespucci*, Padua, 1898.)

In one of his manuscripts, Leonardo notes that: "Il Vespuccio mi vol dare un libro di geometria." (Richter, vol. ii., p. 436.)

Portrait of Scaramuccia. According to Vasari, Leonardo drew the portrait of Scaramuccia, captain of the Zingani, and Giambulari left the drawing to Messer Donato Valdambrini d'Arezzo, canon of San Lorenzo.

DRAWINGS FALSELY ASCRIBED TO  
LEONARDO.

The illustrations to certain manuscripts and printed books have been ascribed to Leonardo, but without foundation. On this question see the *Ricerche* of Signor Uzielli, vol. ii., p. 377-387. See also above, vol. i., p. 219-220.

A few licentious designs have been ascribed to Leonardo and his entourage. One or two of them (*A Young Man surprising a Sleeping Girl—A Fool Making Love to a Girl*) have been engraved by Giovanni Antonio da Brescia. (Duplessis, *Revue universelle des Arts*, vol. xv., p. 162.)

## ENGRAVINGS.

The ascription to Leonardo of a series of prints, generally catalogued as by him, rests purely on hypothesis. But several among them—the *Muse*, the *Four Equestrian Statues*, the three *Heads of Horses*—are so completely worthy of his genius, and, in execution, show so many analogies, not to say identities, with his drawings that we may admit them without hesitation into the list of his authentic works.

I. The *Muse* (according to Passavant, *Le Peintre Graveur*, vol. v., p. 180, no. 2, this is a man's head!) has many analogies with the *Saint John the Baptist* of the South Kensington Museum (reproduced, vol. i., p. 49), especially when the latter is looked at in profile. Examples in the British Museum and in the French Cabinet des Estampes. Reproduced, vol. i., p. 216.

II. Portrait of a young woman. Reproduced, vol. i., p. 217. Doubtful. British Museum.

III. Four designs for equestrian statues. Reproduced, vol. i., p. 221. One of them is the exact reproduction of one of the Windsor drawings, reproduced, vol. ii. p. 5. British Museum.

IV. Head of an old man, slightly turned to the right; a hood, disordered hair. (Bartsch, vol. xiii., p. 241, no. 21.) School of Leonardo.

V. Another head of a beardless old man, front face. (Bartsch, vol. xiii., p. 241, no. 22.) Reproduced, vol. i., p. 220. Formerly ascribed to Mantegna; school of Leonardo.

VI. Another head of an old man, three-quarters to the left; no beard. He wears a double cap. (Bartsch, vol. xiii., p. 242, no. 23.) In Leonardo's manner, except the mouth, which is not characteristic. The burin is handled, exactly as Leonardo handled the pen.

VII. Three heads of horses. (Bartsch, vol. xiii., p. 330, no. 24; Passavant, vol. v., p. 54.) The ascription to Leonardo seems to me incon-

testable, and this plate should be definitively withdrawn from Verrocchio or Zoan Andrea (see vol. i., p. 147, note). Two states are known. British Museum; the Windsor Library has a fragment of this engraving.

A later copy of this plate is extant. It is in reverse, and contains some slight changes; the hatchings are different, the tufts between the horses' ears are larger, and the mane of the horse on the right looks as if it had been combed. British Museum.

VIII. Four interlaced ornaments.<sup>1</sup> Passavant (*Peintre Graveur*, vol. v., p. 183) only describes three. See vol. i., pp. 225-226, 228-229, 232.

A. In the centre the word VICI : round it the words ACADEMIA LEONARDI forming a circle. Ambrosiana, British Museum, Cabinet des Estampes, Paris.

B. In the centre VICI ; in six circles near the circumference ACADEMIA LEONARDI in detached syllables. Same collections.

C. In the centre ACADEMIA  
LEONARDI  
VIN

Same collections.

D. In the centre, on a label, ACHDIA  
LRDI  
VICI  
Ambrosiana.

#### MANUSCRIPTS.

I refrain from cataloguing Leonardo's manuscripts, because that task has already been successfully performed by Dr. Richter (vol. i., pp. 5 *et seq.*) and M. Charles Ravaisson-Mollien.

<sup>1</sup> Not six, as misprinted above. E. M.

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